BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 2019-326-E – ORDER NO. 2021-439

JUNE 18, 2021

South Carolina Energy Freedom Act (House Bill 3659) Proceeding to Address S.C. Code Ann. Section 58-27-460(A)(1)and S.C. Code Ann. Section 58-27- 460(A)(2) (Promulgation and Periodic Review of Standards for Interconnection and Parallel Operation of Generating Facilities to an Electrical Utility's Distribution and Transmission System)	)))))))))	ORDER APPROVING MODIFICATIONS TO SOUTH CAROLINA GENERATOR INTERCONNECTION PROCEDURES TO IMPLEMENT QUEUE REFORM AND APPENDIX DUKE CS

This matter comes before the Public Service Commission of South Carolina (the "Commission" or "PSC") on the Application of Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP," and, together with DEC, "Duke" or the "Companies"), pursuant to S.C. Code Ann. § 58-47-460, S.C. Code Ann. Regs. 103-823, Order No. 2020-660, and other applicable rules and regulations, for expedited review and approval of revisions to the South Carolina Generator Interconnection Procedures ("SC GIP") (the "Application") to enable a Cluster Study[1] process and to transition the Companies' South Carolina generator interconnection study process to a Cluster Study process ("Queue Reform Proposal").

[1] All capitalized terms not otherwise defined herein shall have the meaning assigned to them in the SC GIP and proposed Appendix Duke CS, filed as Attachment 2 to Duke's Application.

I. PROCEDURAL BACKGROUND

The South Carolina Energy Freedom Act ("Act 62") recognized the importance of the generator interconnection process to adding renewable energy to the grid and directed the Commission to review the State's interconnection policies and procedures under S.C. Code Ann. § 58-27-460. To that end, on October 9, 2019, the Commission tasked the Commission Staff with opening the instant docket to address the directives in Section 58-27-460(A), as amended. On September 15, 2020, the Companies filed a joint request, together with Dominion Energy South Carolina, Inc. ("DESC"), South Carolina Solar Business Alliance, Inc. ("SCSBA," now known as Carolinas Clean Energy Business Association or "CCEBA"), and Southern Current, LLC, requesting the Commission address the directives from Section 58-47-460 in two phases of work. As proposed, the first phase would focus more narrowly on Commission approval of revisions to the SC GIP to allow the Companies to expeditiously address their queue reform initiative. The second phase would involve comprehensive revisions to the other portions of the SC GIP not implicated by Duke's Queue Reform Proposal, after a series of stakeholder meetings intended to seek consensus on proposed reforms. Commission Order No. 2020-660, issued on October 1, 2020, granted the joint request to proceed with the docket in a two-phase approach.

Duke filed its Application requesting expedited Commission review and approval of the Queue Reform Proposal on November 17, 2020. Through the Application, DEC and DEP asked the Commission to:

1) Approve limited enabling revisions to the current SC GIP, filed with Duke's Application as Attachment 1, to allow Utilities the option to implement an alternative Cluster Study interconnection study process;

2) Authorize Duke to transition the Companies' South Carolina generator

interconnection study process to a Definitive Interconnection Study Process, consistent with the process recently authorized by the North Carolina Utilities Commission ("NCUC");

3) Approve a new Duke-specific Appendix to the SC GIP ("Appendix Duke CS"), filed with Duke's Application as Attachment 2, pursuant to which the Companies will administer the Definitive Interconnection Study Process; and

4) Terminate the Memorandum of Understanding between Duke, the South Carolina Office of Regulatory Staff ("ORS") and SCSBA approved by Order No. 2016-191 relating to the Companies' administration of the pre-existing SC GIP study process.

The Application details the significant time and effort invested by the Companies to engage with the SCSBA and other interested stakeholders in both South Carolina and North Carolina through 13 stakeholder meetings over the course of nearly two years to develop the Queue Reform Proposal. According to the Companies' Application, the Companies began informally engaging with stakeholders and held a queue reform kickoff meeting on March 18, 2019. The Companies formalized the North Carolina-SouthCarolina stakeholder process in June 2019 after the NCUC determined in its most recent review of the North Carolina Interconnection Procedures ("NC Procedures") that the "current serial study process is unsustainable for the [Companies] based upon current and growing volumes of utility scale Interconnection Requests" and directed a formal queue reform stakeholder process be initiated.[2]

After over a year of stakeholder meetings, the Companies filed their Queue Reform Proposal with the NCUC on May 15, 2020. After filing the Queue Reform Proposal, the Companies and stakeholders continued to engage in an effort to resolve outstanding issues.

On August 31, 2020, the Companies filed an updated Queue Reform Proposal with the

[2] *Order Approving Revised Interconnection Standard and Requiring Testimony and Reports*, at 60, N.C.U.C.Docket No. E-100, Sub 101 (June 14, 2019).

NCUC that reflected nearly complete consensus with stakeholders, which the NCUC approved by order issued on October 15, 2020.[3]

The Companies held the final stakeholder meeting on October 30, 2020, to receive pre-filing input on the proposed Queue Reform Proposal in South Carolina. Duke incorporated stakeholder feedback received during the meeting and states that it did not receive any subsequent input from stakeholders, despite an invitation to provide written comments. Thus, the Companies represent that the proposal contained in their Application represents a consensus between Duke and SCSBA, and that no other stakeholder objects to the proposal.

SCSBA confirmed its agreement on January 20, 2021, when it filed comments with the Commission stating its support for the limited revisions to the SC GIP proposed in Duke's Application. In SCSBA's view, the proposed changes will "expedite the study of new generation projects, allow the sharing of costs for improvements to Duke's system among Interconnection Customers that will most directly benefit from those upgrades, and ultimately streamline the development of new renewable generation in Duke's South Carolina service territory."[4] DESC likewise filed comments indicating support for Duke's proposed modifications to the SC GIP, noting that the changes will provide utilities with the flexibility to study interconnection requests under either the existing serial study process or a Commission-approved Cluster Study process.[5]

On January 22, 2021, the Companies filed a letter with the Commission noting the

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[3] *Order Approving Queue Reform*, N.C.U.C. Docket. No. E-100, Sub 101 (October 15, 2020).
[4] SCSBA Comments (filed January 20, 2021).
[5] DESC Comments (Nov. 17, 2020) (caveating that "DESC anticipates filing a proposal for a DESC-specific Cluster-Study process at a later date[.]").

support of SCSBA and that no other party had filed comments or otherwise objected to the Queue Reform Proposal in the more than sixty (60) days since Duke filed its Application. Accordingly, Duke requested that the Commission approve the Companies' Application no later than February 10, 2021. On January 27, 2021, the Hearing Officer entered Order No. 2021-9-H directing parties to file comments and/or proposed orders no later than February 5, 2021, and announcing that the Commission would consider the Application at its business meeting on February 10, 2021.

Given the significant amount of stakeholder collaboration that has resulted in this consensus approach to queue reform for Duke's Interconnection Customers in the Carolinas and the fact that there are no known issues remaining in dispute pertaining to the Queue Reform Proposal, the Commission finds that it is appropriate to issue a decision on Duke's Queue Reform Proposal based on the filings by the parties, in lieu of an evidentiary hearing. In support of this position, the Commission further notes that regulatory approvals are also required from the Federal Energy Regulatory Commission ("FERC") in order to implement the Queue Reform Proposal, and such filings at the FERC are dependent upon the approval of the Queue Reform Proposal by this Commission. Moreover, the Commission understands that efficient development of additional renewable energy in the Carolinas is largely dependent upon solving the regulatory challenges which the Queue Reform Proposal is designed to address.

II. STATUTORY STANDARDS AND REQUIRED FINDINGS

Act 62 requires the Commission to:

> [P]romulgate and periodically review standards for interconnection and parallel operation of generating facilities to an electrical utility's distribution and transmission system, where such interconnection is under the jurisdiction of the commission pursuant to Title 16,

> Chapter 12, Subchapter II of the United States Code, as amended, regulations and order of the Federal Energy Regulatory Commission, and the laws of South Carolina.[6]

In reviewing the interconnection procedures, the Commission may consider "any issue, which, in the exercise of its discretion, the commission deems relevant to improving the fairness and effectiveness of the procedures."[7] The Commission must ensure that the standards are "fair, reasonable, and nondiscriminatory with respect to interconnection applicants, other utility customers, and electrical utilities" and "serve the public interest in terms of overall cost and system reliability."[8]

III. DISCUSSION

The Companies are responsible for safely and reliably interconnecting new generating facilities to the Companies' distribution and transmission systems. The Commission has adopted the SC GIP to regulate the Companies' process for studying Interconnection Requests submitted by South Carolina Interconnection Customers subjectto the Commission's jurisdiction, including qualifying facilities ("QFs") under the Public Utility Regulatory Policies Act of 1978 ("PURPA").

Under the SC GIP, such projects have traditionally been processed and studied on a "first come, first served" basis in a "serial queue" based upon the timing of their submission of an Interconnection Request. The Companies similarly administer generator interconnection queueing and processing under interconnection procedures adopted by the FERC and the NCUC, which have also traditionally used a serial queueing and study process.

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[6] S.C. Code Ann. § 58-27-460(A)(1).
[7] *Id.* § 58-27-460(A)(2).
[8] *Id.* § 58-27-460(A)(3).

The Application demonstrates that Duke has achieved success interconnecting significant amounts of utility-scale solar to the Companies' systems. However, the Companies' Application also demonstrates that reform is needed to address the growing challenges and complexities facing Duke's generator interconnection process in the Carolinas.

As Duke acknowledges, the Companies' existing serial queuing and study process is no longer capable of managing the significant number of new Interconnection Customers requesting to connect to the Duke systems, particularly in light of the increasing need to make substantial upgrades to the Companies' distribution and transmission systems to interconnect new generation.

Under the current serial queuing process, 100% of the upgrade costs are assigned to the earliest-queued projects, even though later-queued projects may also benefit from those same upgrades. For many Interconnection Customers, bearing the entire cost of these significant upgrades can render new generation projects infeasible, causing projects to either pursue delays or withdraw from the queue altogether.

The Companies' Queue Reform Proposal to transition DEC's and DEP's Section 4 study process to a Cluster Study process is set forth in the proposed Appendix Duke CS to the SC GIP. The Cluster Study approach allows "ready" projects to be clustered and studied together and then allocates the costs to interconnect among all Interconnection Customers in the cluster based upon their relative impact to the grid. The Companies' Queue Reform Proposal builds on Cluster Study frameworks developed and implemented by other utilities across the country and is designed to provide significant flexibility to Interconnection Customers early in the study process while also reducing risk and increasing business certainty as Interconnection Customers progress towards an Interconnection Agreement. To that end, Duke's Queue Reform

Proposal offers an optional Informational Interconnection Study, which will allow prospective Interconnection Customers to make more informed business decisions about the feasibility of a proposed Interconnection Request. In addition, once an Interconnection Request is submitted and a project enters the Definitive Interconnection Study Process, Duke has committed to a robust customer engagement process to provide Interconnection Customers with detailed information regarding the timing and cost of the proposed interconnection.

The Definitive Interconnection Study Process is also designed to reduce speculative projects entering the queue by requiring Interconnection Customers to demonstrate project "readiness"—*i.e,* the right to sell power from the facility via a binding contract—or to provide increased financial security if the project cannot demonstrate readiness or risk a Withdrawal Penalty if the project fails to achieve commercial operation. In this way, the Definitive Interconnection Study Process will provide greater certainty to developers that are ready to interconnect by incentivizing Interconnection Customers to submit only commercially viable "ready projects" into the Definitive Interconnection Study Process, so that all Interconnection Customers can proceed through the interconnection process with fewer delays and disruptions.

In sum, Duke's proposed Definitive Interconnection Study Process, by promoting transparency and incentivizing "ready" projects, will reduce the number of speculative utility-scale projects entering the queue and will enable the Companies to more timely, fairly and efficiently process new Interconnection Requests. SCSBA's comments support the transition of Duke's interconnection study process to the proposed Definitive Interconnection Study Process Cluster Study approach. Based on Duke's Application, the comments filed by SCSBA and DESC, and the entire record of this proceeding, the Commission finds that the Companies' Queue Reform Proposal provides necessary reforms to the SC GIP for Duke's Interconnection

Customers and is consistent with Act 62's requirements for the Commission to ensure that the generator interconnection process is efficient, reasonable, and non-discriminatory for all Interconnection Customers.[9]

Finally, the Commission recognizes that the Companies operate integrated transmission systems and, in some areas, distribution systems that extend across state lines throughout the Companies' service territories in both South Carolina and North Carolina. Moreover, many Interconnection Customers interconnecting to the Companies' transmission systems are subject to FERC-approved generator interconnection procedures under the Companies' Open Access Transmission Tariff ("OATT"). Accordingly, the Commission acknowledges that the integrated nature of the Companies' systems and overlapping system impacts of new Interconnection Customers throughout the Carolinas further supports coordinated and complementary regulatory approvals of Queue Reform by this Commission, the NCUC and FERC.

Based on the Commission's review of the information provided in Duke's Application, the significant pre-filing stakeholder efforts undertaken, the consensus achieved and confirmed through the comments of SCSBA (now known as CCEBA) and DESC, the fact that no other party has otherwise objected to the Queue Reform Proposal, the Commission believes that the Companies' Queue Reform Proposal as addressed herein should be approved.

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

1. The Commission has adopted the SC GIP to regulate the Companies' process for studying Interconnection Requests submitted by South Carolina Interconnection Customers subject to the Commission's jurisdiction, including qualifying facilities ("QFs") under the Public

[9] *See* S.C. Code Ann. § 58-27-460(A)(3).

Utility Regulatory Policies Act of 1978 ("PURPA").

2. Under the SC GIP, such projects have traditionally been processed and studied on a "first come, first served" basis in a "serial queue" based upon the timing of their submission of an Interconnection Request.

3. The Companies' Application demonstrates that reform is needed to address the growing challenges and complexities facing Duke's generator interconnection process in the Carolinas.

4. As Duke acknowledges, the Companies' existing serial queuing and study process is no longer capable of managing the significant number of new Interconnection Customers requesting to connect to the Duke systems, particularly in light of the increasing need to make substantial upgrades to the Companies' distribution and transmission systems to interconnect new generation.

5. The Cluster Study approach allows "ready" projects to be clustered and studied together and then allocates the costs to interconnect among all Interconnection Customers in the cluster based upon their relative impact to the grid.

6. Based on Duke's Application, the comments filed by SCSBA and DESC, and the entire record of this proceeding, the Commission finds that the Companies' Queue Reform Proposal provides necessary reforms to the SC GIP for Duke's Interconnection Customers and is consistent with Act 62's requirements for the Commission to ensure that the generator interconnection process is efficient, reasonable, and non-discriminatory for all Interconnection Customers.

7. The Companies' Queue Reform Proposal as addressed herein should be approved.

V. ORDERING CLAUSES

IT IS THEREFORE ORDERED THAT:

1) The Companies' Queue Reform Proposal is hereby approved consistent with this Order. In particular:

a. The Commission approves the enabling revisions to the current SC GIP, presented as Attachment 1 to Duke's Application, to allow the utilities subject to the SC GIP the option to implement an alternative Cluster Study interconnection study process;

b. The Commission authorizes Duke to transition the Companies' South Carolina generator interconnection study process to a Definitive Interconnection Study Process, by providing written notice to the Commission upon obtaining necessary complementary approvals from FERC;

c. The Commission approves the new Appendix Duke CS, presented as Attachment 2 to Duke's Application (Order Exhibit No. 1), pursuant to which the Companies will administer the Definitive Interconnection Study Process; and

d. The Commission approves Duke's request to terminate the Memorandum of Understanding between Duke, the ORS, and SCSBA, approved by Order No. 2016-191, relating to the Companies' administration of the pre-existing SC GIP study process, which shall now be subject to the terms and conditions of Appendix Duke CS.

e. Duke shall keep this Commission informed of its progress in securing approval of its queue reform proposal from FERC and any required adjustments to its proposed transition schedule.

2) This Order shall remain in full force and effect until further Order of the Commission.

BY ORDER OF THE COMMISSION:

Justin T. Williams, Chairman
Public Service Commission of
South Carolina

Duke Energy Carolinas, LLC
and
Duke Energy Progress, LLC

Attachment 2

Appendix Duke CS to SC GIP

Duke Energy Carolinas, LLC and Duke Energy Progress, LLC

Appendix to South Carolina Generator Interconnection Procedures for Implementing Alternative Definitive Interconnection Study Process

Effective __/__/2020

Pursuant to Section 4.1.1 of the South Carolina Generator Interconnection Procedures (SC GIP), Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and together with DEC, "Duke") have obtained authorization from the Public Service Commission of South Carolina ("Commission") to transition the Companies' Section 4 generator interconnection study process for South Carolina-jurisdictional Interconnection Customers to a Cluster Study process. The Duke Cluster Study process detailed in this Appendix Duke CS ("Appendix") to the SC GIP is called the "Definitive Interconnection Study Process." Upon obtaining all necessary approvals[1], the Companies plan to apply a consistent Definitive Interconnection Study Process to study all South Carolina-jurisdictional, North Carolina-jurisdictional and FERC-jurisdictional Interconnection Customers.

Section 1 Overview of Appendix Duke CS

1.1 This Appendix to the SC GIP is effective as of the effective date identified above, and is designed to annually Cluster and study all power export Interconnection Customers greater than 250 kW requesting to interconnect and to operate in parallel with the Companies' Systems in South Carolina.

1.2 This Appendix shall not apply to Generating Facilities having a fully executed Interconnection Agreement as of the Appendix's effective date, unless the Interconnection Customer proposes a Material Modification, transfers ownership of the Generating Facility, or application of the Appendix is agreed to in writing by the Utility and the Interconnection Customer. This Appendix shall apply if the Interconnection Customer does not have a fully executed Interconnection Agreement for the Generating Facility as of its effective date. Revised fees and new deposits (if applicable) will apply to new Interconnection Requests and future transactions involving existing Interconnection Requests occurring after the effective date of the Apppendix.

1.3 Capitalized terms used in this Appendix shall have the meanings specified in the SC GIP Attachment 1 Glossary of Terms, or in Attachment 1 of this Appendix.

[1] On October 15, 2020, the North Carolina Utilities Commission approved Duke's proposed revisions to implement the Definitive Interconnection Study Process for North Carolina Jurisdictional Interconnection Customers in N.C.U.C. Docket No. E-100, Sub 101.

1.4 Cross references to Sections of this Appendix shall be identified by the applicable Section or Attachment. Cross references to Sections or attachments of the SC GIP shall be preceded by "SC GIP."

Section 1 provides this overview of the Appendix.

Section 2 addresses modified deposits and requirements applicable to Interconnection Customers electing to proceed through the Definitive Interconnection Study Process.

Section 3 describes the Transitional Study Process.

Section 4 describes an optional Informational Interconnection Study process available to prospective Interconnection Customers considering submitting a Transmission System Interconnection Request(s). Interconnection Customers evaluating different options (such as different sizes, sites or voltages) are encouraged but not required to use the Informational Interconnection Study process before entering the Definitive Interconnection Study Process.

Section 5 establishes the detailed process and requirements for implementing the Definitive Interconnection Study Process.

Attachment 1 provides certain supplemental definitions applicable to the Duke Definitive Interconnection Study Process in addition to the definitions identified in SC GIP Attachment 1.

Attachment 2 is the Transitional Cluster System Impact Study Agreement.

Attachment 3 is the Informational Interconnection Study Request Form and Study Agreement.

Attachment 4 provides Interconnection Customers an overview and timeline of initiation of a Definitive Interconnection System Imapct Cluster Study Process: the DISIS Request Window, initial Customer Engagement Window, and Phase 1 of the DISIS.

Attachment 5 is the Definitive Interconnection System Impact Study (DISIS) Agreement.

Section 2. Modified SC GIP Section 1.3 Interconnection Request Requirements

2.1 Interconnection Customers requesting to be studied under the Definitive Interconnection Study Process shall meet all requirements of SC GIP Section 1.3. However, in lieu of the deposit required by SC GIP Section 1.3.1.2, the Interconnection Request deposit for Interconnection Customers to be evaluated under the Definitive Interconnection Study Process shall equal: (1) $10,000 plus one dollar ($1.00) per kWac of capacity specified in the Interconnection Request

Application Form for all Interconnection Requests less than 1 MW; (2) $20,000 plus one dollar ($1.00) per kWac of capacity specified in the Interconnection Request Application Form for all Interconnection Requests between 1 MW and less than 20 MW; (3) $35,000 plus one dollar ($1.00) per kWac for Interconnection Requests between 20 MW and 50 MW; or (4) $50,000 plus one dollar ($1.00) per kWac for all Interconnection Requests greater than 50 MW. The Interconnection Request Deposit is intended to cover the Utility's reasonably anticipated costs including overheads for conducting the Definitive Interconnection System Impact Study and the Facilities Study. In addition, such deposit shall, be applicable towards the Utility's cost of administering the generator interconnection process as well as any, Upgrades and Interconnection Facilities, including overheads under a future Interconnection Agreement (if applicable).

2.2 An Interconnection Customer wishing to join the next DISIS Cluster shall submit its Interconnection Request to the Utility within, and no later than the close of the DISIS Request Window established in Section 5.3.1.

2.3 The Utility may request additional technical information from the Interconnection Customer as the Utility may reasonably determine necessary consistent with Good Utility Practice to complete the DISIS. Where the Utility determines that technical information provided in an Interconnection Request is not adequate to initiate the Definitive Interconnection Study Process and requests the Interconnection Customer provide supplemental information prior to the close of the initial Customer Engagement Window provided for in Section 5.3.1, the Utility shall provide to the Interconnection Customer a written list detailing all information that must be provided within ten (10) Business Days where the Interconnection Customer's failure to provide the information required by the Utility within the deadline will result in the Interconnection Request being deemed withdrawn.

Section 3. Transitional Study Process

Any Interconnection Customer that has received a Queue Number but has not executed an Interconnection Agreement with the Utility prior to the effective date of this Appendix may request in writing after receiving notice from the Utility to be studied under the following Transition Procedures.

An Interconnection Customer electing to complete the study process under the Transition Procedures must notify the utility in writing and meet all transitional readiness milestone requirements within 60 Calendar Days of the later of the effective date of this Appendix or delivery of written notice of the Utility's transition to the Definitive Interconnection Study Process provided by the Utility. An Interconnection Customer that does not meet the Transition Procedure requirements shall be deemed withdrawn from the Queue and then may submit a new Interconnection Request to be studied under the Definitive Interconnection Study Process.

3.1 Transitional Serial Process.

An Interconnection Customer that has a) a final System Impact Study Report that identifies the Interconnection Facilities and any Upgrades required to feasibly interconnect the proposed Generating Facility, and b) a Facilities Study Agreement executed by the Interconnection Customer prior to the effective date of this Appendix, may opt to continue with the serial Facilities Study process if the Interconnection Customer provides notice in writing to the Utility and meets each of the following requirements that demonstrate readiness within the 60-Calendar Day timeframe prescribed in Section 3:

a) The Interconnection Customer makes a supplemental deposit equal to the greater of: 1) one hundred percent (100%) of the System Upgrade costs identified in the Interconnection Customer's System Impact Study Report; or 2) a minimum deposit based upon the Interconnection Customers' nameplate capacity identified in the Interconnection Request of: $100,000 for Interconnection Customers greater than 1 MW up to 5MW; $150,000 for Interconnection Customers greater than 5 MW up to 10 MW; $200,000 for Interconnection Customers greater than 10 MW up to 20 MW; $500,000 for Interconnection Customers greater than 20 MW up to 50 MW, or $800,000 for Interconnection Customers greater than 50 MW. The supplemental deposit shall be in the form of an irrevocable letter of credit upon which the Utility may draw or a cash deposit. The supplemental deposit shall be held by the Utility as pre-payment for the estimated cost of System Upgrades to be designed by the Utility in the SCGIP Section 4.4 Facilities Study.

b) The Interconnection Customer affirms that it holds exclusive site control to construct the entire Generating Facility and all required Interconnection Facilities to the Point of Interconnection to the Utility's System.

c) The Interconnection Customer provides one of the following:

i. A contract, binding upon the parties to the contract, for the sale of the Generating Facility's energy where the term of the sale is not less than five (5) years; or

ii. Reasonable evidence that the Generating Facility is included in a Utility's Resource Plan or has received a contract award in a Resource Solicitation Process.

3.1.1 For each Interconnection Customer that achieves the Transitional Serial readiness requirements described in Section 3.1, the Utility shall complete the Facilities Study pursuant to the process established in SC GIP Section 4.4 for all Transitional Serial Interconnection Customers within the

timeframe prescribed in Section 5.4.1. The Utility and the Interconnection Customer shall then follow the SC GIP Section 5 Construction Planning and Interconnection Agreement administration process, except that the Section 5.5.1 Readiness Milestone 4 requirement shall not apply to Interconnection Customers participating in the Transitional Serial Study.

3.1.2 If an Interconnection Customer that has entered the Transitional Serial Study process withdraws the Interconnection Request or otherwise does not reach Commercial Operation, the supplemental deposit amount shall be forfeited to the Utility, with amounts deposited for pre-payment of System Upgrades to be used to construct the System Upgrades identified in the System Impact Study Report. If the Interconnection Customer submitted a minimum supplemental deposit amount in excess of its assigned System Upgrades, the minimum deposit amount shall be treated as a Withdrawal Penalty and distributed to fund restudies and if not necessary for re-study will be distributed to fund future Cluster Study costs pursuant to Section 5.7.4. Notwithstanding the foregoing, an Interconnection Customer may withdraw without being subject to a Withdrawal Penalty and be fully refunded pre-payment amounts for System Upgrades where (1) the Interconnection Customer's System Upgrades and Interconnection Facilities identified in the Facilities Study Report exceed the Interconnection Customer's Section 3.1.a) minimum deposit amount; (2) the Interconnection Customer's System Upgrades and Interconnection Facilities costs identified in the Facilities Study Report increase by more than twenty-five percent (25%) compared to the costs identified in the Interconnection Customer's System Impact Study Report; and (3) the Interconnection Customer provides written notice of withdrawal to the Utility within ten (10) Business Days of receipt of the Facilities Study Report.

3.1.3 If the Interconnection Customer proceeds to execute an Interconnection Agreement, the supplemental deposit shall be applied towards future construction costs required to complete the interconnection under the Interconnection Agreement and shall be trued up by the Utility in the detailed estimated Upgrade charges in the Interconnection Agreement.

3.2 Transitional Cluster Study Process.

An Interconnection Customer with an assigned Queue Position prior to the effective date of this Appendix, may opt to enter the transitional cluster study (Transitional Cluster Study) if the Interconnection Customer meets the requirements in Section 3.2.1 and provides written notice to the Utility pursuant to the process established in Section 3. All Interconnection Customers who enter the Transitional Cluster Study shall be considered to have an equal Queue Position, and identified Upgrade costs shall be allocated according to Section 5.3.4. The Transitional Cluster Study costs shall be allocated according to the method described in Section 5.3.3.

3.2.1 A Transitional Cluster Study general informational meeting open to all eligible Interconnection Customers shall be held within thirty (30) calendar days of the effective date of this Appendix. To join the Transitional Cluster Study, the Interconnection Customer must meet all of the following requirements within the timeframe prescribed in Section 3:

a) Execute a Transitional Cluster System Impact Study Agreement (Attachment 2);

b) Make a supplemental Interconnection Request study deposit, if necessary, to increase the Interconnection Customer's total study deposit to equal the amount required under Section 2.1;

c) Affirm that it has exclusive site control for the entire Generating Facility and all required Interconnection Facilities to the Point of Interconnection to the Utility's System; and

d) Provides one of the following:

i. A contract, binding upon the parties to the contract, or reasonable evidence that the Interconnection Customer has established a legally enforceable obligation binding upon the Interconnection Customer (or has filed a Complaint with the Commission alleging a legally enforceable obligation has been established), for sale of the Generating Facility's energy to the Utility, where the term of the sale is not less than five (5) years; or

ii. Reasonable evidence that the Generating Facility is included in a Utility's Resource Plan or has received a contract award in a Resource Solicitation Process; or

iii. Reasonable evidence that the Interconnection Customer's Interconnection Request was accepted by the Utility and its Queue Position was initially established at least 365 days prior to the Utility's initiation of the Transitional Cluster Study pursuant to Section 3.

3.2.2 If one or more valid requests are received into the Transitional Cluster Study, the Utility shall undertake an expedited thirty (30) Calendar Day customer engagement process as provided for in Section 5.3.1 and shall then initiate a Phase 1 study under the procedures prescribed in Section 5.3.7.1 (Transitional Cluster Study Phase 1) to evaluate the impact of the proposed interconnection(s) within the Transitional Cluster Study on the reliability of the Utility's System. The Utility shall use Reasonable Efforts to complete the Transitional Cluster Study Phase 1 consisting of a power flow

and voltage analysis within ninety (90) Calendar Days. The Transitional Cluster Study Phase 1 Report shall identify the Interconnection Facilities and System Upgrades that are expected to be required as a result of the Interconnection Request(s) and provide a non-binding good-faith indicative estimate of cost responsibility and a non-binding good-faith estimated time to construct. The Utility will host a meeting to discuss the results of Transitional Cluster Study Phase 1 within ten (10) Calendar Days of issuing the Transitional Cluster Study Phase 1 Report.

3.2.3 Within thirty (30) Calendar Days of the Utility's publication of the Transitional Cluster Study Phase 1 Report, each Interconnection Customer electing to proceed with Phase 2 of the Transitional Cluster Study shall submit a supplemental deposit based upon the Interconnection Customers' nameplate capacity identified in the Interconnection Request of: $100,000 for Interconnection Customers greater than 1 MW up to 5MW; $150,000 for Interconnection Customers greater than 5 MW up to 10 MW; $200,000 for Interconnection Customers greater than 10 MW up to 20 MW; $500,000 for Interconnection Customers greater than 20 MW up to 50 MW, or $800,000 for Interconnection Customers greater than 50 MW.

An Interconnection Customer electing to withdraw from the Transitional Cluster Study prior to commencement of the Phase 2 study shall be assigned its allocated Transitional Cluster Study Phase 1 study costs subject to the withdrawal process under Section 5.7.3, but shall not be subject to any Withdrawal Penalty.

3.2.4 Once the Transitional Cluster Study Phase 2 commences, the Utility shall complete an updated power flow/voltage analysis (if necessary), stability analysis and short circuit analysis for the Interconnection Customers remaining in the Transitional Cluster Study pursuant to the procedures in Section 5.3.7.3. The Utility shall use Reasonable Efforts to complete the Phase 2 analysis within one hundred fifty (150) Calendar Days. The results of this analysis shall identify the Interconnection Facilities and System Upgrades expected to be required to reliably interconnect the Generating Facilities proceeding in the Transitional Cluster Study and shall provide a non-binding good-faith estimate of cost responsibility and a non-binding good-faith estimated time to construct. The Phase 2 Report shall identify each Interconnection Customer's estimated allocated costs for the Interconnection Facilities and System Upgrades that would be borne by the Interconnection Customer under a future Interconnection Agreement.

If the Interconnection Customer withdraws the Interconnection Request at any time after Phase 2 commences or otherwise does not reach Commercial Operation, the Section 3.2.3 supplemental deposit amount provided after Phase 1 shall be treated as a Withdrawal Penalty and distributed to fund future Cluster Study costs pursuant to Section 5.7.4, unless (1) the System Upgrades assigned to the Interconnection Customer

exceeds the supplemental deposit amount required under Section 3.2.3; and (2) the Utility determines consistent with Good Utility Practice that a Withdrawal Penalty should not be assigned pursuant to the standards prescribed in Section 5.7.3.

3.2.5 Within thirty (30) Calendar Days of the Utility's publication of the Transitional Cluster Study Phase 2 Report, each Interconnection Customer within the Transitional Cluster Study shall:

a) Submit a non-refundable deposit equal to one hundred percent (100%) of the System Upgrade costs identified in the Transitional Cluster Study Phase 2 Report, that would be borne by the Interconnection Customer under a future Interconnection Agreement. The deposit shall be in the form of an irrevocable letter of credit upon which the Utility may draw or a cash deposit;

b) Demonstrate definitive readiness by providing

i. a contract, binding upon the parties to the contract, for sale of the Generating Facility's energy to the Utility, where the term of the sale is not less than five (5) years; or

ii. providing reasonable evidence that the Generating Facility is included in a Utility's Resource Plan and, if required, has filed an application for a Certificate of Public Convenience and Necessity from the Commission or has received a contract award in a Resource Solicitation Process; and

c) Execute a Facilities Study Agreement to proceed with Facilities Study under SCGIP Section 4.4.

If any Interconnection Customer within the Transitional Cluster Study fails to meet the foregoing requirements, such Interconnection Customer shall be deemed withdrawn and subject to the Withdrawal Penalty identified in Section 3.2.4. The Utility shall determine whether re-study of the Transitional Cluster Interconnection Customers is required pursuant to the procedures of Section 5.3.7.5 prior to executing the Facilities Study Agreement and returning it to the Interconnection Customers.

If an Interconnection Customer withdraws at any time after demonstrating readiness pursuant to this Section and committing to proceed to Facilities Study, the Withdrawal Penalty assigned shall equal the greater of the Section 3.2.3 supplemental deposit, or the pre-payment of System Upgrades required by Section 3.2.5.a), which shall be forfeited to the Utility, with amounts deposited for pre-payment of System Upgrades to be used to construct the System Upgrades identified in the Traditional Cluster System Impact Study Report. A Withdrawal Penalty shall be assigned unless (1) the System Upgrades assigned to the Interconnection Customer

exceeds the supplemental deposit amount required under Section 3.2.3; and (2) the Utility determines consistent with Good Utility Practice that a Withdrawal Penalty should not be assigned pursuant to the standards prescribed in Section 5.7.3.

3.2.6 The Utility shall complete the Facilities Study for all Interconnection Customers in the Transitional Cluster Study pursuant to SC GIP Section 4.4 within the timeframe prescribed in Section 5.4.1. Within ten (10) Business Days of the Utility's issuance of the Facilities Study Report, the Interconnection Customers shall either increase or the Utility shall decrease its additional non-refundable deposit provided after Phase 2 of the Transitional Cluster Study to equal the cost of any System Upgrades identified in the Transitional Cluster Facilities Study Report, that would be borne by the Interconnection Customer under a future Interconnection Agreement, or the Interconnection Request shall be deemed withdrawn. The Utility and the Interconnection Customer shall follow the Section 5 Construction Planning and Interconnection Agreement administration process, except that the Milestone 4 requirement in Section 5.5.1 shall not apply to Interconnection Customers participating in the Transitional Cluster Study.

Section 4. Informational Interconnection Study Process for Transmission System Interconnections

4.1 At any time, a prospective Interconnection Customer may request a Utility perform Informational Interconnection Studies for Transmission System Generating Facility interconnections. The Interconnection Customer shall submit a separate Informational Interconnection Study Request for each Generating Facility and may submit multiple Informational Interconnection Study Requests for different Generating Facility sizes or configurations at a single site. An Informational Interconnection Request to evaluate one Generating Facility interconnecting at two different voltage levels shall be treated as two Informational Interconnection Study Requests. Any one developer shall have no more than five (5) requests for Informational Interconnection Study reports pending at one time. The Interconnection Customer must submit a deposit with each Informational Interconnection Request if more than one request is submitted for a single Generating Facility or site.

4.2 The prospective Interconnection Customer shall use the request form in Attachment 3 and shall describe the assumptions that the Interconnection Customer wants the Utility to study within the scope described in Section 4.4. Within five (5) Business Days after receipt of a request for an Informational Interconnection Study, the Utility shall provide to the Interconnection Customer an Informational Interconnection Study Agreement in the form provided in Attachment 3, including a non-binding good faith estimate of the timing and cost to complete the Informational Interconnection Study. Notwithstanding the above, the Utility shall not be required as a result of an Informational Interconnection Study request

to conduct any additional Interconnection Studies with respect to any other Interconnection Request.

4.3 Interconnection Customer shall execute and return the Informational Interconnection Study Agreement to the Utility within ten (10) Business Days of receipt of an agreed upon scope of work and shall deliver the Informational Interconnection Study agreement, the technical data, and a $10,000 deposit to the Utility. The Utility shall then countersign and return the Informational Interconnection Study agreement within ten (10) Business Days of receipt.

4.4 Scope of Informational Interconnection Study.

4.4.1 The intent of the Informational Interconnection Study is to aid a prospective Interconnection Customer in its business decisions related to interconnection of a Generating Facility prior to entering the Section 4 Study Process. The Informational Interconnection Study shall consist of analysis based on the assumptions and scope of work specified by the Interconnection Customer and agreed to by the Utility in the Informational Interconnection Study Agreement. The Informational Interconnection Study shall preliminarily identify the potential Interconnection Facilities and the Network Upgrades, and the estimated cost thereof, that may be required to interconnect a proposed Generating Facility based upon the results and assumptions of the Informational Interconnection Study. The Informational Interconnection Study shall be performed solely for informational purposes and is non-binding and does not confer any rights, as the Interconnection Customer must still successfully apply to interconnect to the Utility's System. The Utility shall utilize existing studies to the extent practicable in conducting the Informational Interconnection Study. Informational Interconnection Study Procedure.

4.5 Informational Interconnection Study Procedure.

4.5.1 The executed Informational Interconnection Study Agreement, the deposit, and technical and other data called for therein must be provided to the Utility within ten (10) Business Days of the Interconnection Customer's receipt of the Informational Interconnection Study Agreement. The Utility shall use Reasonable Efforts to complete the Informational Interconnection Study within a mutually agreed upon time period specified in the Informational Interconnection Study Agreement. If the Utility is unable to complete the Informational Interconnection Study within such time period, it shall notify the Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required. After the Informational Interconnection Study is concluded, any difference between the Informational Interconnection Study deposit and the actual cost of the study shall be paid to the Utility or refunded to the Interconnection Customer, consistent with the timeframe and procedures established in SCGIP Section 6.3.3.

Section 5. Overview of Definitive Interconnection Study Process

5.1 Applicability.

Pursuant to SC GIP Section 4.1.1, Duke is administering the Definitive Interconnection Study Process detailed in this Appendix as the SC GIP Section 4 Study process for all Interconnection Customers. Interconnection Customers may initially elect to obtain a Pre-Application Report (SC GIP 1.2) or an Informational Interconnection Study (Section 4), prior to submitting an Interconnection Request and proceeding into the Definitive Interconnection Study Process. Attachment 4 provides Interconnection Customers an overview and timeline of initiation of a Definitive Interconnection Study Process: the DISIS Request Window, initial Customer Engagement Window, and Phase 1 of the DISIS. Customers that elect to withdraw from the Definitive Interconnection Study Process may be subject to a Withdrawal Penalty, as further addressed in Section 5.7.

5.2 Scoping Meeting for DISIS.

The Utility shall, within ten (10) Business Days after the close of the DISIS Request Window, host an open Scoping Meeting, for all Interconnection Customers with Interconnection Requests received in the DISIS Request Window. If requested by an Interconnection Customer, the Utility shall also hold individual customer specific Scoping Meetings, which must be requested in writing no later than fifteen (15) Business Days after the close of the DISIS Request Window.

The purpose of the Scoping Meeting is to discuss alternative interconnection options; to exchange information, including any available transmission data that would reasonably be expected to impact such interconnection options; to review such information; and to determine the potential feasible Points of Interconnection. The Utility and Interconnection Customer will bring to the meeting such technical data, including, but not limited to: (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues as may be reasonably required to accomplish the purpose of the meeting. The Utility and Interconnection Customer will each bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the meeting, Interconnection Customer shall designate a single and definitive Point of Interconnection to be studied by the Utility during the Cluster Study.

At the Interconnection Customer's option, the Utility and the Interconnection Customer will identify alternative Point(s) of Interconnection and configurations at the Scoping Meeting to evaluate in the System Impact Cluster Study process and attempt to eliminate alternatives in a reasonable fashion given the resources and information available. The Interconnection Customer shall select a single definitive Point of Interconnection to be studied no later than the execution of the Definitive System Impact Study Agreement and shall provide affirmation of site control to construct the entire Generating Facility and all required Interconnection Facilities

to the designated Point of Interconnection no later than commencement of the Phase 1 study process described in Section 5.3.7.1.

5.3 Definitive Interconnection System Impact Cluster Study.

5.3.1 Initiation of a Definitive Interconnection System Impact Study Cluster Study.

The Utility shall accept Interconnection Requests during the "DISIS Request Window." A DISIS Request Window shall open annually on January 1 and shall remain open for 180 Calendar Days or through the following Business Day if the 180th day falls on a weekend or a NERC recognized holiday.

If one or more Interconnection Requests are received, for sixty (60) Calendar Days following the close of the DISIS Request Window (the "Customer Engagement Window"), the Utility shall work with the participating Interconnection Customers to build models, verify data, hold stakeholder meetings (including Scoping Meetings, as appropriate), cure any deficiencies in the Interconnection Request, and generally prepare for the start of the Definitive Interconnection System Impact Study. Notwithstanding the preceding sentence and upon written consent of all Interconnection Customers within a specific Cluster, the Utility may shorten the Customer Engagement Window in order to start the Definitive Interconnection System Impact Cluster Study earlier. Within the first ten (10) Business Days following the close of the DISIS Request Window, the Utility shall post on the Utility's website a list of Interconnection Requests for that Cluster, identifying for each Interconnection Request: (i) the location by county and state; (ii) the distribution or transmission substation or transmission line or lines where the interconnection will be made; (iii) cluster being requested; and (iv) the type of Generating Facility to be constructed including fuel type such as wind, natural gas, coal, or solar.

Prior to the close of the Customer Engagement Window, each Interconnection Customer shall (i) execute a DISIS Agreement pursuant to Section 5.3.5; (ii) provide initial security equal to 1 times the Section 2.1 study deposit amount; and (iii) provide evidence satisfactory to the Utility of either an initial Readiness Milestone (M1), as described in Section 5.3.10, or additional security in the form of an irrevocable letter of credit or cash in lieu of the M1 Readiness Milestone equal to one times the Study Deposit required in Section 2.1.

At the end of the Customer Engagement Window, all Interconnection Requests that meet the foregoing readiness requirements and that have an executed DISIS Agreement shall be included in that DISIS Cluster. Any Interconnection Requests not deemed sufficient pursuant to SCGIP Section 1.3.3 at the close of the Customer Engagement Window shall not be included in the commencing DISIS Cluster. Immediately following the Customer Engagement Window, the Utility shall initiate the Definitive

Interconnection System Impact Cluster Study process that is described in Section 5.3.7.

5.3.2 Initiation of a Resource Solicitation Cluster.

At any time, and solely for purposes of administering a Commission approved Competitive Resource Solicitation, a Utility may initiate a Resource Solicitation Cluster. The Utility may administer the Resource Solicitation Cluster either separately or as part of a Definitive Interconnection System Impact Cluster Study initiated pursuant to Section 5.3. Where the Resource Solicitation Cluster is studied separately from a Definitive Interconnection System Impact Study Cluster, the Resource Solicitation Cluster shall respect Queue Position and shall be studied as its own Cluster based upon a Utility-designated Queue Number where the Utility acts as authorized representative for the Interconnection Customer(s) in connection with a Competitive Resource Solicitation and shall study the Cluster based upon the Queue Number of the Resource Solicitation Cluster relative to the Queue Position of all other Interconnection Requests/Clusters.

The Utility shall publicize the scope of study and timeframe to initiate the Resource Solicitation Cluster study as part of the Competitive Resource Solicitation. The timelines shall indicate the close of the Customer Engagement Window for that Resource Solicitation Cluster. Where the Utility is administering the Resource Solicitation Cluster as part of a Definitive Interconnection System Impact Study Cluster the Definitive Interconnection System Impact Study shall proceed as described in Sections 5.3.5 and 5.3.7.

A Generating Facility that initially is included in a Resource Solicitation Cluster may also reserve a later Queue Position separate from the Resource Solicitation Cluster. In either case, the Interconnection Customer must meet all requirements associated with maintaining each Queue Position for the Generating Facility. In the event a Generating Facility has multiple Queue Positions, it shall not be double counted in the study models.

After completion of the Definitive Interconnection System Impact Study process, the Utility must select one of the studied combinations by identifying in the Generating Facility or combination of Generating Facilities determined to meet the goals of the Competitive Resource Solicitation prior to the commencement of the Facilities Study associated with Generating Facilities selected in the Resource Solicitation Process. Prior to the completion of the Facilities Study for the combination of Generating Facilities selected in the Competitive Resource Solicitation, the Utility may replace Interconnection Customers in the combination, subject to any necessary re-study pursuant to Sections 5.3.7.5 or 5.3.9. While conducting the Definitive Interconnection Study Process, the Utility may suspend

further action on the Interconnection Requests in the Competitive Resource Solicitation that are not included in the selected combination. Where a Competitive Resource Solicitation is administered as part of an annual Definitive Interconnection System Impact Study Cluster, an Interconnection Customer that is rejected in the Competitive Resource Solicitation may elect to continue to be studied as part of the Definitive Interconnection System Impact Study Cluster by continuing to demonstrate readiness or providing Financial Security, as required in Section 5.3.10 or 5.3.11. In contrast, where a Generating Facility is rejected in a Resource Solicitation Cluster Process administered separately from a Definitive Interconnection System Impact Study Cluster, the Generating Facility shall lose the Queue Position it held as part of the Competitive Resource Solicitation. If a Generating Facility is selected at the conclusion of the Competitive Resource Solicitation, the Generating Facility may no longer maintain more than one Queue Position.

5.3.3 Allocation of Study Costs for DISIS Cluster.

The administering Utility shall determine each Interconnection Customer's share of the costs of completing the DISIS Cluster Study (including general queue administration costs and overheads) by allocating: (1) ten percent (10%) of the applicable study costs to Interconnection Customers on a per capita basis based on the number of Interconnection Requests included in the applicable Cluster; and (2) ninety percent (90%) of the applicable study costs to Interconnection Customers on a pro-rata basis based on requested megawatts included in the applicable Cluster. If an Interconnection Customer exits the Cluster prior to the Utility commencing Phase 2 pursuant to Section 5.3.7.3 (including where the Utility determines through Phase 1 that a distribution-level System Impact Study should be completed for one or more distribution-level Interconnection Customers in lieu of being evaluated through Phase 2), then the Utility shall determine each Interconnection Customer's costs of preparing for and completing the DISIS prior to commencing Phase 2 and shall then separately determine each remaining Interconnection Customer's costs for the remainder of the DISIS.

If a Phase 3 re-study or general re-study is required pursuant to Section 5.3.7.5 or 5.3.9, then the Utility shall allocate the costs of the re-study as provided for in this section amongst the Interconnection Customers included in the re-study. If an Interconnection Customer proposes non-material changes to its Interconnection Request requiring limited re-study, the costs of the limited re-study shall be directly assigned to the requesting Interconnection Customer. The Facilities Study for a Utility administering the Definitive Interconnection Study Process shall continue to be an individual study and the costs for each Facilities Study shall be directly assigned to the Interconnection Customer associated with such study.

5.3.4 Allocation of Interconnection Facilities and Upgrade Costs Within DISIS Cluster.

The Utility shall calculate each Interconnection Customer's share of System Upgrades and Interconnection Facilities costs identified in Cluster Studies in the following manner:

a) Interconnection Station Upgrades, including all switching stations, shall be allocated based on the number of Generating Facilities interconnecting at an individual station on a per capita basis (i.e. on a per Interconnection Request basis). If multiple Interconnection Customers are connecting to the Utility's System through shared Interconnection Facility (ies), those Interconnection Customers shall be considered one Interconnection Customer for the per capita calculation described in the preceding sentence. Shared Interconnection Facilities shall be allocated based on the number of Generating Facilities sharing that Interconnection Facility on a per capita basis.

b) All Network Upgrades other than those identified in Subsection 5.3.4.a shall be allocated based on the proportional impact of each individual Generating Facility in the Cluster Studies on such Network Upgrades. The proportional impact of such Network Upgrades shall be calculated as follows. All transmission lines and transformers identified as Network Upgrades shall be allocated using distribution factor analysis. Voltage support related Upgrades shall be allocated using a voltage impact analysis that identifies each Generating Facility's contribution to the voltage violation. System Upgrades associated with upgrading existing breakers due to short circuit current exceeding breaker capability shall be allocated proportionally based on the short circuit current contribution of each Interconnection Request.

c) Costs of Distribution Upgrades shall be allocated or assigned to each Interconnection Customer based upon the proportional impact of each individual Generating Facility in the Cluster Study based upon the need for the Distribution Upgrade. Distribution line work (e.g., reconductoring) shall be allocated to those Generating Facilities contributing to the need for the Upgrade on a per MW basis, based upon location (% of Upgrade). All other Distribution Upgrade costs shall be allocated on a per capita basis (i.e. on a per Interconnection Request basis) based upon the number of projects on the feeder or substation contributing to the need for the Upgrade.

d) Costs of Interconnection Facilities are directly assigned to the Interconnection Customer(s) using such facilities.

5.3.5 Execution of Definitive Interconnection System Impact Study Agreement.

Unless otherwise agreed, pursuant to the Scoping Meeting provided for in Section 5.2, within thirty (30) Calendar Days of the Utility's acknowledgement of a valid Interconnection Request requesting that a Definitive Interconnection System Impact Study be performed, the Utility shall provide to the Interconnection Customer a DISIS Agreement in the form of Attachment 5 to this Appendix. At least seven (7) Calendar Days before the close of a Customer Engagement Window, the Utility shall provide to each Interconnection Customer proposing to enter the DISIS Cluster a non-binding updated good faith estimate of the cost and timeframe for completing the Definitive Interconnection System Impact Study.

The Interconnection Customer shall execute the DISIS Agreement and deliver the executed DISIS Agreement to the Utility no later than the close of the Customer Engagement Window or its Interconnection Request shall be withdrawn.

5.3.6 Scope of Definitive Interconnection System Impact Study (DISIS).

The DISIS shall evaluate the impact of the proposed Interconnection Requests in the Cluster on the reliability of the Utility's System. The DISIS will consider the Utility's Base Case as well as all Generating Facilities (and with respect to (iii) below, any identified Network Upgrades associated with such higher queued requests) that, on the date the DISIS Request Window closes: (i) are existing and directly interconnected to the Utility's System; (ii) are existing and interconnected to Affected Systems and may have an impact on the Interconnection Request; and (iii) have a pending Interconnection Request to interconnect to the Utility's System with a higher Queue Position than the DISIS Cluster, either individually under Section 3.1 or included in a higher queued Cluster Study.

As set forth in Section 5.3.7, the DISIS is a phased study in which Phase 1 consists of a power flow and voltage analysis that is followed in Phase 2 by a short circuit analysis and a stability analysis. Any DISIS re-studies (Phase 3) shall consist of a power flow/voltage analysis, a short circuit analysis, and/or a stability analysis, as needed. The DISIS report shall state the assumptions upon which it is based; state the results of the analyses; and provide the requirements or potential impediments to providing the requested interconnections, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. The DISIS shall provide a list of facilities that are required as a result of the Interconnection Request and a non-binding good faith preliminary estimate of the required Upgrades, including cost responsibility for Interconnection Customers in the Cluster, and a nonbinding good faith estimated time to construct.

For purposes of clustering Interconnection Requests, the Utility may make reasonable changes to the requested Point(s) of Interconnection as part of the DISIS to facilitate the efficient and reliable interconnection of Interconnection Customers at common points of interconnection. The Utility shall notify Interconnection Customers in writing of any intended changes to the requested Point(s) of Interconnection and the Point(s) of Interconnection shall only change upon mutual agreement. Where the Interconnection Customer agrees to a Utility's proposed change to the Point of Interconnection and the change results in a loss of site control, the Interconnection Customer shall have 150 days to provide affirmation and reasonable documentation, if requested by the Utility, that site control to the new Point of Interconnection has been obtained or the Interconnection Customer shall be required to post the additional financial security required by Section 5.3.11 to continue to proceed through the Definitive Interconnection Study process.

Where an Interconnection Customer is proposing to interconnect a Generating Facility to the Utility's Distribution System and is determined through Phase 1 not to cause or contribute to the need for Network Upgrades requiring further study in Phase 2, the Utility shall complete a distribution level System Impact Study, as further discussed in Section 5.3.7.1 below.

5.3.7 Definitive Interconnection System Impact Study Procedures.

Attachment 4 provides an overview and timeline of the Definitive Interconnection Study Process, including the phases and milestones associated with the Definitive Interconnection System Impact Study.

5.3.7.1 The DISIS Cluster shall consist of all eligible Interconnection Requests that have satisfied M1 (or provided financial security in lieu of M1), have executed a DISIS Agreement, and have provided all required information before the close of the Customer Engagement Window. The Utility shall use Reasonable Efforts to complete the first phase (Phase 1) consisting of a power flow and voltage analysis within ninety (90) Calendar Days. The Phase 1 Report shall identify the Interconnection Facilities and System Upgrades that are expected to be required as a result of the Interconnection Request(s) and a non-binding good-faith indicative level estimate of cost responsibility and a non-binding good-faith estimated time to construct. After issuing the DISIS Phase 1 Report, the Utility shall hold a second thirty (30) calendar day Customer Engagement Window and will host an open stakeholder meeting (the Phase 1 Report Meeting) within ten (10) Business Days of publishing the DISIS Phase 1 results on the Utility's website.

Where the Utility determines through the initial Phase 1 study that a distribution-level Interconnection Customer will not cause or contribute to the need for Network Upgrades, the Utility shall notify the Interconnection Customer in writing during the post-Phase 1 Customer Engagement Window that the Utility shall complete an individual Distribution-level System Impact Study for the proposed Generating Facility within fifty (50) Business Days. Upon issuance of the individual distribution-level System Impact Study report, the Interconnection Customer would then proceed immediately to the SC GIP Section 4.4 Facilities Study process. Interconnection Customers that are studied for distribution level impacts only must continue to meet all Readiness Milestone requirements (or provide security in lieu of the Readiness Milestone) to proceed to Facilities Study under SC GIP Section 4.4.

5.3.7.2 Within twenty (20) Calendar Days of the Phase 1 Report Meeting, all Interconnection Customers electing to proceed to Phase 2 are required to satisfy the requirements of Readiness Milestone 2 (M2). Interconnection Customers that do not provide the Readiness Milestone (or provide additional security in lieu of the Readiness Milestone) by the required date shall be deemed withdrawn from the Queue and are subject to a Withdrawal Penalty pursuant to Section 5.7.3.

5.3.7.3 Interconnection Customers who satisfy the M2 Readiness Milestone or provide the required security to the Utility shall continue to Phase 2 of the Definitive Interconnection System Impact Study. Phase 2 consists of an updated power flow/voltage analysis (if necessary), stability analysis and short circuit analysis for the Interconnection Customers remaining in the DISIS Cluster. The Utility shall use Reasonable Efforts to complete the Phase 2 analysis within one hundred fifty (150) Calendar Days. The results of this analysis shall identify the Interconnection Facilities and Network Upgrades expected to be required to reliably interconnect the Generating Facilities in that DISIS Cluster. The Phase 2 Report shall provide non-binding estimates of the costs of required System Upgrades and Interconnection Facilities allocated to each Interconnection Customer within the Cluster. The Utility shall hold a third thirty (30) Calendar Day Customer Engagement Window and host an open stakeholder meeting (Phase 2 Report Meeting) within ten (10) Business Days of publishing the DISIS Phase 2 Report on the Utility's website.

5.3.7.4 Within twenty (20) Calendar Days of the Phase 2 Report Meeting, each Interconnection Customer in the Cluster shall notify the Utility in writing whether it intends to proceed to the SC GIP Section 4.4 Facilities Study, where failure to provide the required notice shall result in the Interconnection Request being deemed withdrawn from the Queue and the Interconnection Customer being subject to a Withdrawal Penalty pursuant to Section 5.7.3.

i. If no Interconnection Customers withdraw from the Queue at this stage, the Definitive Interconnection Study Process shall advance to the SC GIP Section 4.4 Facilities Study stage. The Utility shall notify the Interconnection Customers in the Cluster in writing that Phase 3 is not required and simultaneously provide each Interconnection Customer the Facilities Study Agreement in the form of SC GIP Attachment 9.

ii. If one or more Interconnection Customer(s) withdraws from the Cluster, the Utility shall determine if a full System Impact re-study is necessary. If the Utility determines that a re-study is not necessary and Phase 3 is not required, the Utility shall provide an updated Phase 2 Report within thirty (30) Calendar Days of such determination and the Definitive Interconnection Study Process shall advance to the SC GIP Section 4.4 Facilities Study. When the updated Phase 2 Report is issued, the Utility shall notify Interconnection Customers in the Cluster, in writing, that Phase 3 is not required and shall simultaneously provideeach of those Interconnection Customers the Facilities Study Agreement in the form of SC GIP Attachment 9.

iii. If one or more Interconnection Customers withdraws from the Cluster and the Utility determines that a full System Impact re-study is necessary, the Utility will continue with such study under Phase 3 (5.3.7.5) until the Utility determines that no further re-studies are required. If an Interconnection Customer withdraws after the Phase 3 re-study described in Section 5.3.7.5 or during the Facilities Study stage and the Utility determines that System Impact re-studies are necessary, the Cluster shall be re-studied under the terms of Phase 3. The Utility shall notify each Interconnection Customer in the Cluster, in writing, that a re-study is required.

5.3.7.5 If required by the Utility under Section 5.3.7.4, Interconnection Customers shall continue with the third phase (Phase 3) of the DISIS. Phase 3 may consist of updated power flow/voltage analysis, stability analysis, and/or short circuit analysis if necessary for the Interconnection Customers remaining in the Cluster. The Utility shall use Reasonable Efforts to complete the Phase 3 analysis within one hundred fifty (150) Calendar Days. The results of this analysis shall identify the Interconnection Facilities and System Upgrades expected to be required to reliably interconnect the Generating Facilities in the Cluster and shall provide non-binding Preliminary Estimated Upgrade Charges for the required Upgrades. The Phase 3 Report shall identify each Interconnection Customer's estimated allocated costs for Interconnection Facilities and System Upgrades. The Utility shall hold a fourth thirty (30) Calendar Day Customer Engagement Window and will host an open stakeholder meeting (Phase 3 Report Meeting) within ten (10) Business Days of publishing the DISIS Phase 3 results on the Utility's website. The Utility shall notify Interconnection Customers in the Cluster in writing when no further re-studies are required and simultaneously provide the Interconnection Customer(s) a Facilities Study Agreement in the form of SC GIP Attachment 9.

5.3.7.6 Within thirty (30) Calendar Days of the notice that no System Impact restudies are needed and delivery of an Facilities Study Agreement by the Utility, each Interconnection Customer within the Cluster that has completed the DISIS process is required to (i) return an executed Facilities Study Agreement in the form of SC GIP Attachment 9 (executed and including all required data identified therein); and (ii) provide Readiness Milestone 3 (M3) (or provide additional security in lieu of the Readiness Milestone). Milestones for the Definitive Interconnection Study process are described in Section 5.3.10. Interconnection Customers that do not provide the executed Facilities Study Agreement and Readiness Milestone (or provide security in lieu of the Readiness Milestone) by the required date shall be deemed withdrawn from the Queue and are subject to a Withdrawal Penalty pursuant to Section 5.7.3.

5.3.7.7 At the request of an Interconnection Customer or at any time the Utility determines that it will not meet the indicated timeframe for completing the DISIS, the Utility shall notify Interconnection Customer(s) in writing as to the schedule status of the DISIS Cluster. If the Utility is unable to complete the DISIS within the time period, it shall notify Interconnection

Customer(s) and provide an estimated completion date with an explanation of the reasons why additional time is required.

5.3.8 Post-DISIS Report Meeting.

Within ten (10) Business Days of furnishing a final DISIS study report to Interconnection Customer(s) within the Cluster and posting the report on the Utility's website, the Utility shall convene an open meeting to discuss the study results. The Utility shall, upon request, also make itself available to meet with individual Interconnection Customers after the study report is provided.

5.3.9 Re-Study.

If re-study of the DISIS other than the re-study described above in Section 5.3.7.4 is required due to a higher or equal priority queued project dropping out of the Queue, or due to modification of an earlier queued project subject to Section 1.6, the Utility shall notify the Interconnection Customer(s) within the Cluster in writing. The Utility shall make Reasonable Efforts to ensure such re-study takes no longer than one hundred fifty (150) Calendar Days from the date of notice. Any cost of re-study shall be borne by Interconnection Customer(s) being re-studied.

5.3.10 Readiness Milestones.

Satisfaction of the requirements of Readiness Milestones 1, 2 and 3 are required as applicable throughout the Definitive Interconnection Study Process to demonstrate the readiness of the Interconnection Customer to develop the Generating Facility. Satisfaction of the requirements of Readiness Milestone 4 is required after the Definitive Interconnection Study Process has concluded, but before the Interconnection Agreement is issued by the Utility to the Interconnection Customer. An Interconnection Customer who does not satisfy the requirements of an applicable Readiness Milestone (or provide additional security in lieu thereof) is subject to withdrawal from the Queue and payment of a Withdrawal Penalty pursuant to Section 5.7.3.

5.3.10.1 Readiness Milestone 1 (M1).

M1 is satisfied by the Interconnection Customer providing evidence of one of the options below. M1 may also be satisfied by providing additional security as described in Section 5.3.11 in lieu of demonstrating readiness.

a) Executed term sheet (or comparable evidence of a legally enforceable obligation) related to a contract, binding upon the parties to the contract, for sale of the

Generating Facility's energy, where the term of the sale is not less than five (5) years, or

b) Reasonable evidence the project has been selected by the Utility in a Resource Plan or is offering to sell its output through a Resource Solicitation Process.

5.3.10.2 Readiness Milestone 2 (M2).

M2 is satisfied by the Interconnection Customer providing evidence of one of the options below. M2 may also be satisfied by providing additional security as described in Section 5.3.11 in lieu of demonstrating readiness.

a) Executed term sheet (or comparable evidence of a legally enforceable obligation) related to a contract, binding upon the parties to the contract, for sale of the Generating Facility's energy, where the term of the sale is not less than five (5) years; or.

b) Reasonable evidence that the project has been selected by the Utility in a Resource Plan or is offering to sell its output through Resource Solicitation Process.

5.3.10.3 Readiness Milestone 3 (M3).

M3 is satisfied by the Interconnection Customer providing evidence of one of the options below. M3 may also be satisfied by providing additional security as described in Section 5.3.11 in lieu of demonstrating readiness.

a) Executed contract, binding upon the parties to the contract, for the sale of the Generating Facility's energy, where the term of the sale is not less than five (5) years, or where the Interconnection Customer has initiated dispute resolution regarding the Utility's failure to provide an executable contract or to execute the contract tendered by the Interconnection Customer and, in such circumstances, the Interconnection Customer shall have twenty (20) Calendar Days to execute a mutually-agreeable power purchase agreement or to file a formal complaint with the Commission; or

b) Reasonable evidence that the project has been selected by the Utility in a Resource Plan and, if required, has filed an application for a Certificate of Public Convenience and Necessity from the

Commission or has received a contract award in a Resource Solicitation Process; or

c) Reasonable evidence that the Interconnection Customer's Generating Facility has been included in a submitted application meeting all eligibility requirements to participate in a voluntary renewable energy program approved by the Commission pursuant to S.C. Code Section 58-41-30.

5.3.10.4 Readiness Milestone 4 (M4).

M4 must be achieved within ten (10) Business Days of the Utility's issuance of the Facilities Study Report and is satisfied by the Interconnection Customer providing the prepayment amount as described below and evidence of one of the options below. M4 may also be satisfied by providing additional security as described in Section 5.3.11 in lieu of demonstrating readiness.

a) Executed contract, binding upon the parties to the contract, for the sale of the Generating Facility's energy, where the term of the sale is not less than five (5) years; or

b) Reasonable evidence that the project has been selected by the Utility in a Resource Plan and, if required, has received a Certificate of Public Convenience and Necessity from the Commission or has received a contract award in a Resource Solicitation Process.

The M4 prepayment amount shall be the greater of a) one hundred percent (100%) of the System Upgrade costs identified in the Facilities Study Report that would be borne by the Interconnection Customer under a future Interconnection Agreement or b) a minimum deposit based upon the Interconnection Customer's nameplate capacity identified in the Interconnection Request of: $100,000 for Interconnection Customers greater than 1 MW up to 5MW; $150,000 for Interconnection Customers greater than 5 MW up to 10 MW; $200,000 for Interconnection Customers greater than 10 MW up to 20 MW; $500,000 for Interconnection Customers greater than 20 MW up to 50 MW, or $800,000 for Interconnection Customers greater than 50 MW. If the Interconnection Customer is assigned System Upgrades in the Facilities Study Report, M4 shall be held by the Utility as a non-

refundable pre-payment for the estimated cost of such System Upgrades and shall be trued up by the Utility in the detailed estimated Upgrade charges included in a future Interconnection Agreement or shall be forfeited to the Utility to construct the assigned System Upgrades if the Interconnection Request is subsequently withdrawn by the Interconnection Customer subject to the cap established for ready projects in Section 5.7.3.1. The M4 prepayment amount may be in the form of an irrevocable letter of credit upon which the Utility may draw, cash, surety bond or other financial arrangement that is acceptable to the Utility.

5.3.11 Definitive Interconnection Study Process Security Requirements.

The security required in lieu of demonstrating readiness at each Readiness Milestone is identified below (and also provided in Attachment 4-B). The security amount is dependent on whether the Interconnection Customer satisfied a Readiness Milestone and which phase of the Definitive Interconnection Study Process the customer is entering. All security described below for Readiness Milestones M1-M3 shall be in the form of an irrevocable letter of credit upon which the Utility may draw or cash. The M4 Security may be in the same form as the M-1-M3 Security or may also be in the form of a surety bond or other financial arrangement that is acceptable to the Utility.

An Interconnection Customer may opt to provide security in lieu of satisfying the requirements of Readiness Milestones M1 – M4, as described in Section 5.3.10. The security provided is applied towards the security amount required for each successive milestone if the Interconnection Customer does not withdraw from the Queue. For example, the security provided for M2 is applied to the additional amount of security required for M3.

The amount of security required for each Readiness Milestone for Interconnection Customers that do not provide a demonstration of readiness is:

M1 = 2 times the Section 2.1 study deposit amount

M2 = 2 times the Section 2.1 study deposit amount

M3 = 3 times the Section 2.1 study deposit amount

M4 = Greater of System Upgrade costs identified in the Interconnection Customer's Facilities Study Report or a minimum deposit amount equal to the minimum deposit required for ready projects in Section 5.3.10.4.

If an Interconnection Customer is initially required to provide increased financial security under this Section 5.3.11 because it cannot satisfy the requirements of a Readiness Milestone under Section 5.3.10, but subsequently does satisfy those requirements prior to the next Readiness Milestone, its security shall be reduced accordingly.

5.4 Facilities Study Timeline.

5.4.1 Where a Utility administers a Definitive Interconnection Study Process and is completing Facilities Study for all Interconnection Customers within a Cluster or Resource Solicitation Cluster, the Utility shall use reasonable efforts to complete the Facilities Study within one hundred fifty (150) Calendar Days for all Interconnection Customers within the Cluster.

5.5 Interconnection Agreement and Scheduling.

5.5.1 All Interconnection Customers must also satisfy the requirements of Readiness Milestone 4 (M4) within ten (10) Business Days of receipt of the Facilities Study Report. Interconnection Customers that do not provide M4 (or provide security in lieu of the Readiness Milestone by the required date) shall be deemed withdrawn from the Queue and subject to a Withdrawal Penalty pursuant to Section 5.7.3.

5.6 Processing Interconnection Request During Pending Dispute.

5.6.1 Where an Interconnection Customer initiates a dispute pursuant to SC GIP Section 6.2 after entering the Definitive Interconnection Study Process, the disputing Interconnection Customer shall have the option to either withdraw from the Cluster and be studied as part of the next Cluster or to continue being evaluated as part of the Cluster provided that it complies with all requirements of the Definitive Interconnection Study Process, including continuing to demonstrate readiness or provide financial security pursuant to Section 5.3.10 and 5.3.11.

5.7 Withdrawal of An Interconnection Request.

5.7.1 As described in SC GIP 6.3.1, an Interconnection Customer may withdraw an Interconnection Request at any time prior to executing an Interconnection Agreement by providing the Utility with a written request for withdrawal, and, as described in SC GIP 6.3.2, an Interconnection Request shall be deemed withdrawn if the Interconnection Customer fails to meet its obligations specified in the Interconnection Procedures, System Impact Study Agreement or Facility Study Agreement or to take advantage of any express opportunity to cure.

5.7.2 Where an Interconnection Customer requests withdrawal during the Definitive Interconnection Study Process, the Utility shall follow the process established in SC GIP 6.3.3. and shall (i) impose the Withdrawal Penalty

described in Section 5.7.3, and (ii), refund any of the refundable portion of Interconnection Customer's study deposit that exceeds the share of the costs assigned to the Interconnection Customer that Utility has incurred after settling the final invoice pursuant to SC GIP Section 6.3.3. If an invoice is not paid within the timeframe provided in SC GIP Section 6.3.3, the Utility shall draw upon the security provided to settle all accounts, which shall include any offsets of amounts due and owing by the Utility. After the final invoice is paid and all accounts are settled, the Utility shall refund or release all remaining security.

5.7.3 Withdrawal Penalty.

An Interconnection Customer shall be subject to a Withdrawal Penalty if it withdraws its Interconection Request from the Queue or the Generating Facility does not otherwise reach Commercial Operation unless (1) the Utility determines consistent with Good Utility Practice that the withdrawal does not negatively affect the timing or cost to interconnect of equal or lower queued projects; or (2) the cost responsibility for the Interconnection Facilities and Upgrades identified for that Interconnection Customer in the current DISIS Phase 2, Phase 3, or Facilities Study report increased by more than twenty-five percent (25%) compared to the costs identified in the previous DISIS report.

5.7.3.1 Calculation of the Withdrawal Penalty for Ready Projects.

If the Interconnection Customer satisfied the Readiness Milestone requirements for the most recent phase of the Definitive Interconnection Study Process prior to withdrawal, that Interconnection Customer's Withdrawal Penalty shall be calculated as follows:

1. If the Interconnection Customer withdraws after M1, but before M2, the Withdrawal Penalty shall be equal to the Interconnection Customer's actual allocated cost of the Definitive Interconnection Study Process.

2. If the Interconnection Customer withdraws after M2, but before M4, the Withdrawal Penalty shall be the higher of the study deposit or one (1) times the Interconnection Customer's actual allocated cost of the Definitive Interconnection Study Process.

3. If the Interconnection Customer withdraws after proceeding to Section 5 and providing M4, the Withdrawal Penalty shall be the higher of the non-refundable pre-payment for the estimated System Upgrades allocated to the Interconnection Customer in

the Facilities Study Report or five (5) times the Interconnection Customer's actual allocated cost of the Definitive Interconnection Study Process. This amount shall be capped at two (2) million dollars. If the M4 prepayment amount provided by the Interconnection Customer exceeded the cap, the Utility shall not be obligated to proceed with constructing the Upgrades assigned to the withdrawing Interconnection Customer and shall refund the prepayment amounts exceeding the capped Withdrawal Penalty to the withdrawing Interconnection Customer and shall allocate the Withdrawal Penalty in accordance with Section 5.7.4 in lieu of constructing the System Upgrade(s) assigned to the withdrawing Interconnection Customer.

5.7.3.2 Calculation of the Withdrawal Penalty for Non-Ready Projects.

If the Interconnection Customer did not satisfy the Readiness Milestone requirements for the most recent phase of the Definitive Interconnection Study Process prior to withdrawal and instead provided financial security pursuant to Section 5.3.11 in lieu of demonstrating readiness, that Interconnection Customer's Withdrawal Penalty shall be dependent on the Phase in which the Interconnection Customer withdraws and shall be calculated as follows:

1. If the Interconnection Customer withdraws in Phase 1 (after M1, but before M2), the Withdrawal Penalty shall be the higher of the study deposit or two (2) times the Interconnection Customer's actual allocated cost of the Definitive Interconnection Study Process. This amount shall be capped at one (1) million dollars.

2. If the Interconnection Customer withdraws in Phase 2 (after M2, but before M3), the Withdrawal Penalty shall be the higher of the study deposit or two (2) times the Interconnection Customer's actual allocated cost of the Definitive Interconnection Study Process. This amount shall be capped at one and one half (1.5) million dollars.

3. If the Interconnection Customer withdraws after proceeding to the Section 4.4 Facilities Study (after M3, but before M4), the Withdrawal Penalty shall be the higher of the study deposit or three (3) times the Interconnection Customer's actual allocated cost of the

Definitive Interconnection Study Process. This amount shall be capped at two (2) million dollars.

4. If the Interconnection Customer withdraws after proceeding to Section 5 and providing M4, the Withdrawal Penalty shall be the higher of the non-refundable pre-payment for the estimated System Upgrades allocated to the Interconnection Customer in the Facilities Study Report or five (5) times the Interconnection Customer's actual allocated cost of the Definitive Interconnection Study Process. There is no cap on the M4 Withdrawal Penalty amount for non-ready projects.

5.7.3.3 Calculation of the Withdrawal Penalty for Projects with Executed Interconnection Agreements.

The Withdrawal Penalty for any Interconnection Customer that has executed an Interconnection Agreement pursuant to SC GIP Section 5.2.1 is the higher of System Upgrade costs assigned to the Interconnection Customer under its executed Interconnection Agreement or five (5) times the Interconnection Customer's actual allocated cost of the Definitive Interconnection Study Process. There is no cap on this Withdrawal Penalty amount.

5.7.4 Distribution of Withdrawal Penalty.

Withdrawal Penalty revenues associated with M1-M3 shall be used to fund generation interconnection studies. Withdrawal Penalty revenues shall first be applied, in the form of a bill credit, to not-yet-invoiced study costs for other Interconnection Customers in the same Cluster. To the extent that such studies are fully credited, the penalty revenues shall be applied to the Utility's general queue administration costs and the costs of future Clusters in queue order. Withdrawn Interconnection Customers shall not receive a bill credit associated with Withdrawal Penalties. Distribution of Withdrawal Penalty revenues to a specific study shall not exceed the total actual study costs. Withdrawal Penalty revenues within a Cluster shall be allocated in a manner comparable to the allocation of study costs described in Section 5.3.3. Specifically, the Withdrawal Penalty revenue distribution to each Interconnection Customer in a specific Cluster, shall be (1) ten percent (10%) on a per capita basis based on the number of Interconnection Requests in the applicable Cluster; and (2) ninety percent (90%) on a pro-rata basis based on requested megawatts included in the applicable Cluster. Where an Interconnection Customer withdraws after achieving the M4 readiness milestone and its assigned System Upgrades exceed the M4 cap amount in Section 5.7.3.1, the Utility shall also follow the process prescribed in this Section for allocating Withdrawal Penalty revenues. The

Utility shall not change the distribution of Withdrawal Penalty revenues without authorization by the Commission.

Attachment 1

Glossary of Terms (Definitive Interconnection Study Process Supplement)

Base Case – The base case power flow, short circuit, and stability data bases used by the Utility for completing interconnection studies for the Interconnection Customer.

Calendar Days – Sunday through Saturday, including all holidays.

Cluster – A group of Interconnection Requests (one or more) that are studied together for the purpose of conducting the Interconnection Studies.

Cluster Study – An interconnection study evaluating one or more Interconnection Requests.

Clustering – The process whereby a group of Interconnection Requests is studied together, instead of serially, for the purpose of conducting the System Impact Study.

Definitive Interconnection Study Process (Definitive Interconnection Study) – An alternative interconnection study process adopted by the Utility, after notice and Commission approval, for purposes of administering a Cluster Study process. The Definitive Interconnection Study Process is inclusive of the DISIS Request Window, Customer Engagement Window, Definitive Interconnection System Impact Study, and the Interconnection Facilities Study.

Definitive Interconnection System Impact Study (DISIS) – An engineering study that evaluates the impact of a Cluster of Interconnection Requests on the safety and reliability of the Utility's System and, if applicable, an Affected System.

Definitive Interconnection System Impact Study Agreement (DISIS Agreement) – Form of System Impact Study agreement contained in Attachment 5 for conducting the Definitive Interconnection System Impact Study.

Definitive Interconnection System Impact Study Cluster (DISIS Cluster) – A Cluster studied through a DISIS.

Definitive Interconnection System Impact Study (DISIS) Request Window – The period of time each starting on January 1 and lasting 180 Calendar Days during which Interconnection Requests are submitted to a Utility for inclusion in a Cluster to be studied and processed pursuant to a Definitive Interconnection Study Process.

Material Modification – A modification to machine data or equipment configuration or to the interconnection site of the Generating Facility that has a material impact on the cost, timing or design of any Interconnection Facilities or

Upgrades. Material Modifications include project revisions proposed at any time after receiving notification by the Utility of a complete Interconnection Request pursuant to Section 1.3.3 that 1) alters the size or output characteristics of the Generating Facility from its Utility-approved Interconnection Request submission; 2) may adversely impact other Interconnection Requests with higher Queue Numbers, or may adversely impact another Interconnection Customer who is part of the same Cluster where the utility is implementing the Definitive Interconnection Study Process.

In addition to the list of modifications to an Interconnection Request identified in the SC GIP that are not indicia of a Material Modification, a change in the point of interconnection to a new location or new voltage level, where requested by the Utility and agreed to by the Interconnection Customer pursuant to Section 5.3.6, is not a Material Modification.

Readiness Milestone – A point in a Definitive Interconnection Study Process at which the Interconnection Customer must satisfy certain requirements set forth in Section 5.3.10 of this Appendix or be subject to increased withdrawal penalties and security.

Resource Plan – An integrated resource plan filed by a Utility with the Commission pursuant to S.C. Code Ann. § 58-37-40.

Resource Solicitation Cluster – A Cluster Study associated with a Resource Plan, Competitive Resource Solicitation or related process.

South Carolina Generator Interconnection Procedures – The term "South Carolina Generator Interconnection Procedures" shall refer to the South Carolina Generator Interconnection Procedures, Forms, and Agreements for State-Jurisdictional Generator Interconnections as approved by the Public Service Commission of South Carolina.

Withdrawal Penalty – A penalty assigned (if applicable) to an Interconnection Customer that withdraws from the Definitive Interconnection Study Process. Withdrawal penalty shall have the meaning set forth in Sections 5.7.2 and 5.7.3 of this Appendix.

Attachment 2

Transitional Cluster System Impact Study Agreement

THIS AGREEMENT is made and entered into this_____ day of_____, 20___ by and between_____, a _____ organized and existing under the laws of the State of_____, ("Interconnection Customer,") and _____a _____existing under the laws of the State of _____, ("Utility"). Interconnection Customer and Utility each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, Interconnection Customer is proposing to develop and to interconnect a Generating Facility with the Utility's System or to develop a generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated _____ which is now being processed by the Utility as Queue Number _____; and

WHEREAS, the Public Service Commission of South Carolina has authorized the Utility to transition to a Definitive Interconnection Study Process and Interconnection Customer has a valid Queue Number as of the effective date of the Appendix Duke CS; and

WHEREAS, Section 3.2 of Appendix Duke CS of the South Carolina Generator Interconnection Procedures ("SC GIP") afford the Interconnection Customer the option to be studied under a "Transitional Cluster Study," with equal Queue Positon to all other Interconnection Requests that enter the Transitional Cluster Study, prior to the Utility fully implementing the Definitive Interconnection Study Process; and

WHEREAS, Interconnection Customer has requested the Utility to perform such a Transitional Cluster Study as described in Section 3.2 of Appendix Duke CS to the SC GIP, which is a combined system impact Cluster Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to physically and electrically connect the Generating Facility as well as other proposed Generating Facilities that established Queue Numbers prior to the Commission's authorization for the Utility to transition to a Definitive Interconnection Study Process.

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

1.0. When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the South Carolina Generator Interconnection Procedures and Appendix Duke CS.

2.0. Interconnection Customer elects and the Utility shall cause to be performed a Transitional System Impact Cluster Study as described in Section 3.2 of Appendix Duke CS. By execution of this Agreement, Interconnection Customer and Utility agree

to rescind any previously executed System Impact Study Agreement and to complete the System Impact Cluster Study pursuant to this Agreement.

3.0. The Transitional Cluster Study shall be based upon the technical information provided by the Interconnection Customer in the Interconnection Request. The Utility reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Transitional Cluster Study and Interconnection Customer shall provide such data. If the information requested by the Utility is not provided by the Interconnection Customer within a reasonable timeframe to be identified by the Utility in writing, the Utility shall provide the Interconnection Customer written notice providing an opportunity to cure such failure by the close of business on the tenth (10^{th}) Business Day following the posted date of such notice, where failure to provide the information requested within this period shall result in the study being terminated and the Interconnection Request being deemed withdrawn.

4.0. The Transitional Cluster Study report shall provide the following information:

- identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;

- identification of any thermal overload or voltage limit violations resulting from the interconnection;

- identification of any instability or inadequately damped response to system disturbances resulting from the interconnection; and

- shall provide a description, estimated cost of, schedule for required facilities to interconnect the Generating Facility to the Utility's System and shall address the short circuit, instability, and power flow issues identified in the most recently published System Impact Study.

5.0. Interconnection Customer has met all requirements described in Section 3.1.2 of Appendix Duke CS within the timeframe prescribed by Section 3 to enter into the Transitional Cluster Study.

6.0. In addition to meeting all requirements of Section 3.2 of Appendix Duke CS to enter and proceed through the Transitional Cluster Study, Interconnection Customer shall have previously provided a deposit for the performance of Interconnection Studies at the time of its Interconnection Request. Interconnection Customer's initial deposit shall be applied towards the Utility's cost of completing the Transitional Cluster Study, and shall be supplemented, if required, pursuant to Section 3.2.1.a of Appendix Duke CS.

The Interconnection Customer shall be allocated the actual costs of the Transitional Cluster Study according to the method described in Section 5.3.3 of Appendix Duke CS. If the Interconnection Customer withdraws from the Cluster Study or otherwise does not reach Commercial Operation, the Interconnection Customer's deposit shall be trued up for costs incurred by the Utility to complete the Transitional Cluster Study and the

Withdrawal Penalty prescribed pursuant to Sections 3.2.4 and 3.2.5 of Appendix Duke CS, and the remaining deposit shall be refunded to the Interconnection Customer pursuant to the process established in SC GIP Section 6.3.3.

7.0. Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the State of South Carolina, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

8.0. Amendment

The Parties may amend this Agreement by a written instrument duly executed by both Parties.

9.0. No Third-Party Beneficiaries

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

10.0. Waiver

10.1. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

10.2. Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, or duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Utility. Any waiver of this Agreement shall, if requested, be provided in writing.

11.0. Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

12.0. No Partnership

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on

behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

13.0. Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

14.0. Subcontractors

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

14.1. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Utility be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

14.2. The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

15.0. Reservation of Rights

The Utility shall have the right to make a unilateral filing with the Commission to modify this Agreement with respect to any rates, terms and conditions, charges, or classifications of service, and the Interconnection Customer shall have the right to make a unilateral filing with the Commission to modify this Agreement; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before the Commission in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties except to the extent that the Parties otherwise agree as provided herein.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert name of Utility]

By: _____ By: _____

Title: _____ Title: _____

Date: _____ Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

ASSUMPTIONS USED IN CONDUCTING THE TRANSITIONAL CLUSTER STUDY

[Assumptions to be completed by Interconnection Customer and Utility]

Attachment 3

Informational Interconnection Request Form and Study Agreement

1. The undersigned Interconnection Customer submits this request to evaluate the interconnection of its Generating Facility with Utility's Transmission System.

2. Interconnection Customer provides the following information:

   a. Address or location of the proposed new Generating Facility site (to the extent known) or, in the case of an existing Generating Facility, the name and specific location (GIS coordinates) of the existing Generating Facility;
   b. Maximum summer at ____ degrees C and winter at _____ degrees C megawatt electrical output of the proposed new Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility;
   c. General description of the equipment configuration;
   d. Proposed Commercial Operation Date to be studied (Day, Month, and Year);
   e. Name, address, telephone number, and e-mail address of Interconnection Customer's contact person;
   f. Approximate location of the proposed Point of Interconnection;
   g. Interconnection Customer Data (set forth in Attachment A)
   h. Primary frequency response operating range for electric storage resources.
   i. Maximum Generating Capacity Requested (in MW); and
   j. A Scope of Work including any additional information that may be reasonably required.

3. $10,000 study deposit amount as specified in Section 4.3 of Appendix Duke CS.

4. This Informational Interconnection Study Request shall be submitted to the representative indicated below:

   [To be completed by Utility]

5. Representative of Interconnection Customer to contact:

   [To be completed by Interconnection Customer]

6. This Interconnection Request is submitted by:

   Name of Interconnection Customer: _____

   By (signature): _____

   Name (type or print): _____

   Title: _____

Date: _____

GENERATING FACILITY DATA FOR INFORMATIONAL INTERCONNECTION STUDY

UNIT RATINGS

kVA _____ °F _____ Voltage _____

Power Factor_____

Speed (RPM) _____ Connection (e.g. Wye) _____

Short Circuit Ratio _____ Frequency, Hertz _____

Stator Amperes at Rated kVA _____ Field Volts _____

Max Turbine MW _____ °F _____

Primary frequency response operating range for electric storage resources.

Minimum State of Charge: _____

Maximum State of Charge: _____

COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA

Inertia Constant, H =_____kW sec/kVA Moment-of-Inertia,
WR^2 =_____lb. $ft.^2$

REACTANCE DATA (PER UNIT-RATED KVA) DIRECT AXIS QUADRATURE AXIS

Synchronous – saturated	X_{dv}_____	X_{qv}_____
Synchronous – unsaturated	X_{di}_____	X_{qi}_____
Transient – saturated	X'_{dv}_____	X'_{qv}_____
Transient – unsaturated	X'_{di}_____	X'_{qi}_____
Subtransient – saturated	X''_{dv}_____	X''_{qv}_____
Subtransient – unsaturated	X''_{di}_____	X''_{qi}_____
Negative Sequence – saturated	$X2_v$_____	
Negative Sequence – unsaturated	$X2_i$_____	
Zero Sequence –	$X0_v$_____	
saturated Zero	$X0_i$_____	
Sequence –	Xl_m_____	
unsaturated		
Leakage Reactance		

Open Circuit	T'_{do}_____	T'_{qo}_____
Three-Phase Short Circuit Transient	T'_{d3}_____	T'_{q}_____
Line to Line Short Circuit Transient	T'_{d1}_____ T''_{d}_____	T''_{q}_____
Short Circuit Subtransient	T'_{d2}_____	
Open Circuit Subtransient	T''_{do}_____	T''_{qo}_____
Line to Neutral Short Circuit Transient		

FIELD TIME CONSTANT DATA (SEC)
ARMATURE TIME CONSTANT DATA (SEC)

Three Phase Short Circuit T_{a3}_____
Line to Line Short Circuit T_{a2}_____ Line to Neutral Short Circuit T_{a1}_____

NOTE: If requested information is not applicable, indicate by marking "N/A."

MW CAPABILITY AND PLANT CONFIGURATION
GENERATING FACILITY DATA ARMATURE WINDING RESISTANCE DATA (PER UNIT)

Positive R_1_____
Negative R_2_____ Zero R_0_____

Rotor Short Time Thermal Capacity I_2^2t = _____
Field Current at Rated kVA, Armature Voltage and PF =_____amps
Field Current at Rated kVA and Armature Voltage, 0 PF =_____amps
Three Phase Armature Winding Capacitance =_____microfarad
Field Winding Resistance = _____ ohms _____°C
Armature Winding Resistance (Per Phase) =_____ ohms _____°C

CURVES

Provide Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves. Designate normal and emergency Hydrogen Pressure operating range for multiple curves.

GENERATOR STEP-UP TRANSFORMER DATA RATINGS

Capacity Self-cooled/
Maximum Nameplate
_____/_____kVA

Voltage Ratio(Generator Side/System side/Tertiary)
_____/_____/_____kV

Winding Connections (Low V/High V/Tertiary V (Delta or Wye))
_____/_____/_____

Fixed Taps Available _____

Present Tap Setting _____

If more than one transformer stage is used to deliver the output from the proposed generator to the Transmission System, please provide the information above for each transformer or transformer type.

IMPEDANCE

Positive

Z_1 (on self-cooled kVA rating) _____%_____X/R

Zero

Z_0 (on self-cooled kVA rating) _____%_____X/R

EXCITATION SYSTEM DATA

Identify appropriate IEEE model block diagram of excitation system and power system stabilizer (PSS) for computer representation in power system stability simulations and the corresponding excitation system and PSS constants for use in the model.

GOVERNOR SYSTEM DATA

Identify appropriate IEEE model block diagram of governor system for computer representation in power system stability simulations and the corresponding governor system constants for use in the model.

WIND GENERATORS

Number of generators to be interconnected pursuant to this Interconnection Request: _____

Elevation: _____ Single Phase _____Three Phase _____

Inverter manufacturer, model name, number, and version:

List of adjustable setpoints for the protective equipment or software:

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet or other compatible formats, such as IEEE and PTI power flow models, must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device, then they shall be provided and discussed at Scoping Meeting.

INDUCTION GENERATORS

(*) Field Volts: _____
(*) Field Amperes: _____
(*) Motoring Power (kW): _____
(*) Neutral Grounding Resistor (If Applicable: _____
(*) I_2^2t or K (Heating Time Constant): _____
(*) Rotor Resistance: _____
(*) Stator Resistance: _____
(*) Stator Reactance: _____
(*) Rotor Reactance: _____
(*) Magnetizing Reactance: _____
(*) Short Circuit Reactance: _____
(*) Exciting Current: _____
(*) Temperature Rise: _____
(*) Frame Size: _____
(*) Design Letter: _____
(*) Reactive Power Required In Vars (No Load): _____
(*) Reactive Power Required In Vars (Full Load): _____
(*) Total Rotating Inertia, H: _____Per Unit on KVA Base

Note: Please consult with Utility prior to submitting the Informational Interconnection Study Request to determine if the information designated by (*) is required.

INFORMATIONAL INTERCONNECTION STUDY AGREEMENT

THIS AGREEMENT is made and entered into this___day of _____, 20___ by and between_____, a _____ organized and existing under the laws of the State of_____, ("Interconnection Customer,") and _____a _____existing under the laws of the State of _____, ("Utility""). Interconnection Customer and Utility each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, Interconnection Customer is evaluating developing a Generating Facility or generating capacity addition to an existing Generating Facility proposing an interconnection with the Utility's Transmission System; and

WHEREAS, Interconnection Customer has submitted to Utility an Informational Interconnection Study Interconnection Request; and

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1. When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in South Carolina Generator Interconnection Procedures authorized by the Commission.

2. Interconnection Customer elects and Utility shall cause an Informational Interconnection Study consistent with Section 4.1 of this Appendix Duke SC to be performed.

3. The scope of the Informational Interconnection Study shall be subject to the assumptions set forth in Attachment A to this Agreement.

4. The Informational Interconnection Study shall be performed solely for informational purposes.

5. The Informational Interconnection Study report shall provide an analysis based on the assumptions specified by Interconnection Customer in Attachment A to this Agreement, as agreed to by the Utility. The Informational Interconnection Study shall identify Utility's Interconnection Facilities and the System Upgrades, and the estimated cost thereof that may be required to interconnect the proposed Generating Facility based upon the assumptions specified by Interconnection Customer in Attachment A.

6. Interconnection Customer shall provide a deposit of ten thousand dollars ($10,000.00) for the performance of the Informational Interconnection Study. The Utility's good faith estimate for the time of completion of the Informational Interconnection Study is [insert date].

7. Upon receipt of the Informational Interconnection Study, the Utility shall charge and Interconnection Customer shall pay the actual costs of the Informational Interconnection Study. The Interconnection Customer must pay any Study costs that exceed the Interconnection Request Deposit without interest within 20 Business Days of receipt of the invoice. If the deposit exceeds the invoiced fees or the Interconnection Customer's costs exceed the aggregate deposits received, the amount of funds equal to the difference will be settled in accordance with Section 6.3 of the South Carolina Generator Interconnection Procedures.

8. Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the State of South Carolina, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

9. Amendment

The Parties may amend this Agreement by a written instrument duly executed by both Parties.

10. No Third-Party Beneficiaries

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

11. Waiver

11.1. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

11.2. Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, or duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the

Interconnection Customer's legal rights to obtain an interconnection from the Utility. Any waiver of this Agreement shall, if requested, be provided in writing.

12. Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

13. No Partnership

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

14. Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

15. Subcontractors

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

15.1. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Utility be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

15.2. The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

16. Reservation of Rights

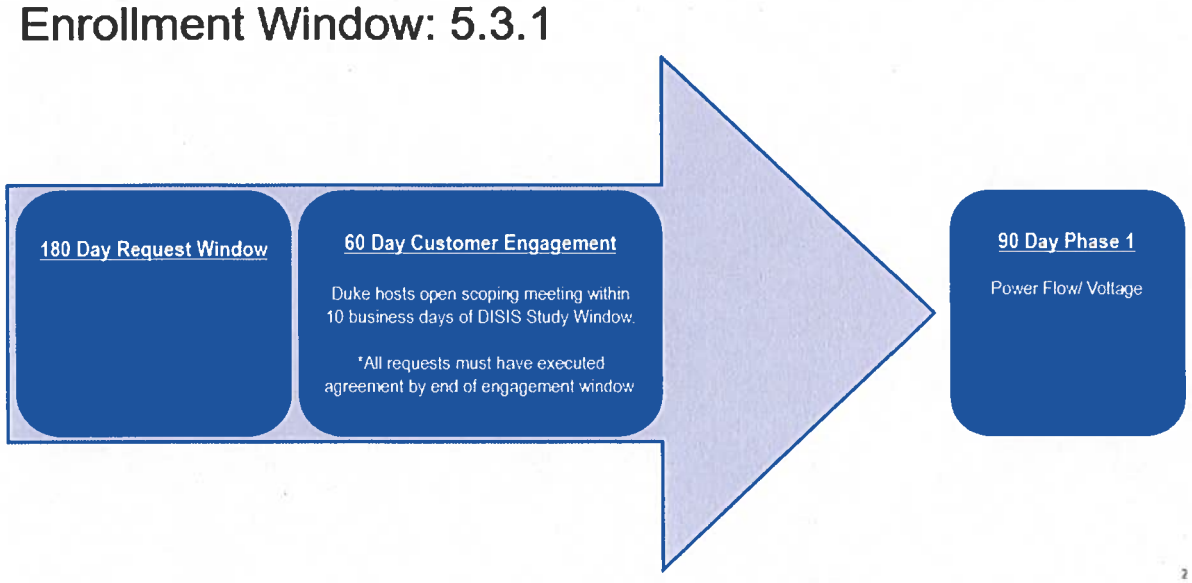
The Utility shall have the right to make a unilateral filing with the Commission to modify this Agreement with respect to any rates, terms and conditions, charges, or classifications of service, and the Interconnection Customer shall have the right to make a unilateral filing with the Commission to modify this Agreement; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before the Commission in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties except to the extent that the Parties otherwise agree as provided herein.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

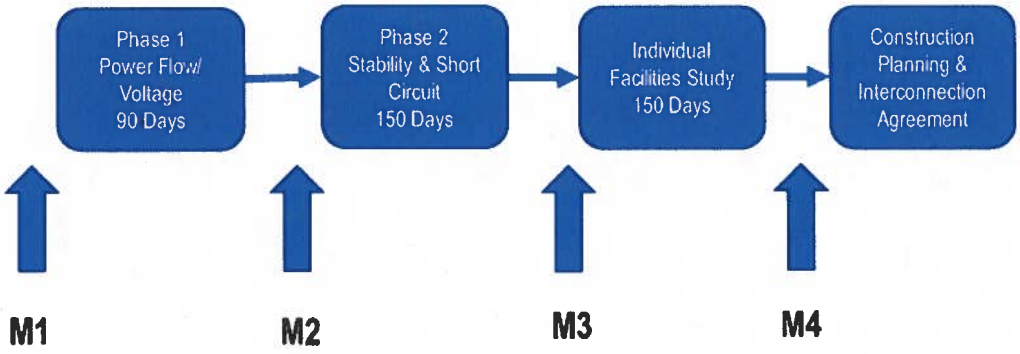
[Insert name of Utility]	**[Insert name of Interconnection Customer]**
_____	_____
Signed_____	Signed _____
Name (Printed):	Name (Printed):
_____	_____
Title_____	

Attachment 4-A

Definitive Interconnection Study Process Overview



Definitive Interconnection Study Process



DISIS Study Process Overview

Phase 1: M1 Required Before Power Flow/Voltage(90 calendar days)

- The Utility shall use Reasonable Efforts to complete the first phase (Phase 1) consisting of a power flow and voltage analysis within ninety (90) Calendar Days.
- The Phase 1 Report shall identify the Interconnection Facilities and System Upgrades that are expected to be required as a result of the Interconnection Request(s) and a non-binding good-faith indicative level estimate of cost responsibility and a non-binding good-faith estimated time to construct.
- After issuing the Phase 1 Report, the Utility shall hold a second thirty (30) calendar day Customer Engagement Window and will host an open stakeholder meeting ("Phase 1 Report Meeting") within ten (10) Business Days of publishing the DISIS Phase 1 results on the Utility's website.
- Where the Utility determines through the initial Phase 1 study that a proposed distribution-level Interconnection Customer will not cause or contribute to the need for Network Upgrades, the Utility shall notify the Interconnection Customer in writing during the post-Phase 1 Customer Engagement Window that the Utility shall complete an individual Distribution-level System Impact Study for the proposed Generating Facility within 50 Business Days. Upon issuance of the individual Distribution-level System Impact Study Report, the Interconnection Customer would then proceed immediately to the SC GIP Section 4.4 Facilities Study process. Interconnection Customers that are studied for distribution level impacts only must continue to meet all Readiness Milestone requirements (or provide security in lieu of the Readiness Milestone) to proceed to Facilities Study under SC GIP Section 4.4.
- Within twenty (20) Calendar Days of the Phase 1 Report Meeting, all Interconnection Customers proceeding in the DISIS to Phase 2 are required to satisfy the requirements of Readiness Milestone 2 ("M2").

Phase 2: M2 Required Before Stability/Short Circuit (150 calendar days)

- Interconnection Customers who satisfy the M2 readiness requirements or provide the required security to the Utility shall continue in to the second phase ("Phase 2") of the Definitive Interconnection System Impact Study.
- Phase 2 consists of an updated power flow/voltage analysis (if necessary), stability analysis and short circuit analysis for the Interconnection Customers remaining in the DISIS Cluster.
- The Utility shall use Reasonable Efforts to complete Phase 2 analysis within one hundred fifty (150) Calendar Days.
- The results of this analysis shall identify the Interconnection Facilities and Network Upgrades expected to be required to reliably interconnect the Generating Facilities in that DISIS Cluster. The Phase 2 Report shall provide non-binding estimates of the costs of required Upgrades and Interconnection Facilities allocated to each Interconnection Customer within the Cluster.
- The Utility shall hold a third thirty (30) calendar day Customer Engagement Window and will host an open stakeholder meeting ("Phase 2 Report Meeting") within ten (10) Business Days of publishing the DISIS Phase 2 results on the Utility's website.
- Within twenty (20) Calendar Days of the Phase 2 Report Meeting, each Interconnection Customer in the Cluster shall notify the Utility in writing whether it intends to proceed to the Section 4.4 Facilities Study.

Phase 3: Re-study (if necessary, 150 calendar days)

- If one or more Interconnection Customers withdraws from the Cluster and the Utility determines a full system impact re-study is necessary, the Utility will continue with System Impact restudies ("Phase 3") until the Utility determines that no further re-studies are required. If a customer withdraws after the Phase 3 re-study described in Section 5.3.7.5 or during the Facilities Study and the Utility determines system impact level re-studies are necessary, the Cluster shall be restudied under the terms of Phase 3. The Utility shall notify Interconnection Customers in the Cluster in writing that a re-study is required.
- The Utility shall use Reasonable Efforts to complete the Phase 3 analysis within one hundred fifty (150) Calendar Days.
- The Utility shall hold a fourth thirty (30) calendar day Customer Engagement Window and will host an open stakeholder meeting ("Phase 3 Report Meeting") within ten (10) Business Days of publishing the DISIS Phase 3 results on the Utility's website.

Facilities Study: M3 Required Before Individual Facilities Study (150 calendar days)

- Within thirty (30) Calendar Days of the notice that no System Impact restudies are needed and delivery of an Facilities Study Agreement by the Utility, each Interconnection Customer within the Cluster that has completed the DISIS process is required to (i) return an executed Facilities Study Agreement in the form of Attachment 9 (completed and including all required data identified therein); and (ii) provide Readiness Milestone 3 ("M3") (or provide security in lieu of the Readiness Milestone).
- The Utility shall use reasonable efforts to complete the Facilities Study for all Interconnection Customers within a Cluster or Resource Solicitation Cluster within one hundred fifty (150) Calendar Days.
- The Facilities Study Report shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the System Impact Studies and to allow the Generating Facility to be interconnected and operated safely and reliably.

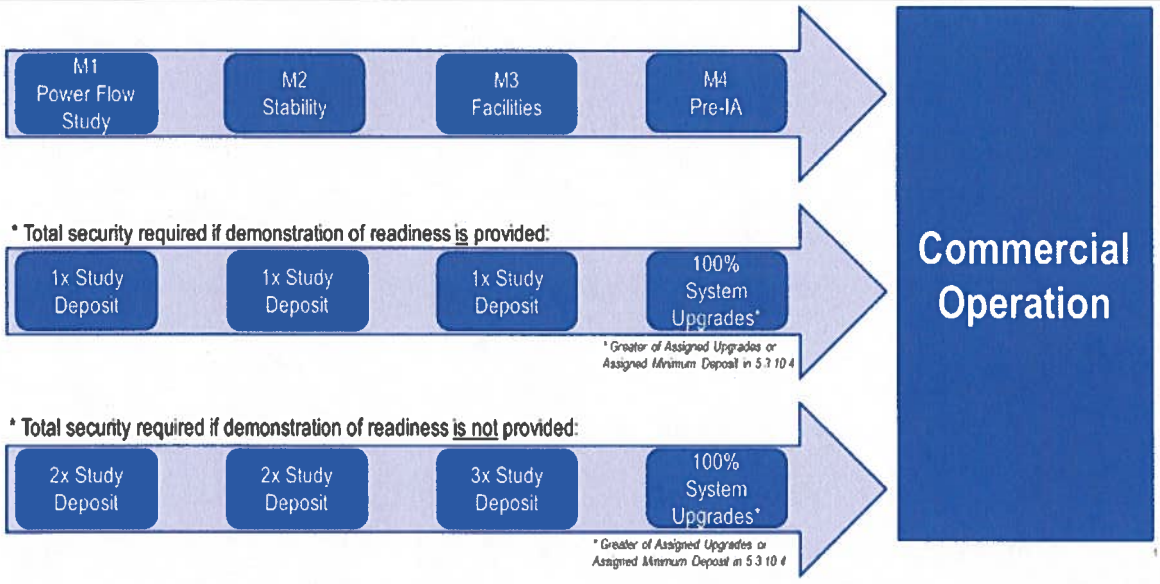
IA: M4 Required Before Construction Planning and Interconnection Agreement

- All Interconnection Customers within a Cluster or Resource Solicitation Cluster must satisfy the requirements of Readiness Milestone 4 ("M4") within ten (10) Business Days of receipt of the Facilities Study Report.
- Within ten (10) Business Days of receipt of the Facilities Study Report, the Interconnection Customer shall request a Construction Planning Meeting. The Construction Planning Meeting request shall be in writing and shall include the Interconnection Customer's reasonably requested date for completion of the construction of the Upgrades and Interconnection Facilities.
- The Construction Planning Meeting shall be scheduled within ten (10) Business Days of the SC GIP Section 5.1.1 request from the Interconnection Customer, or as otherwise mutually agreed to in writing by the parties.

- The purpose of the Construction Planning Meeting is to identify the tasks for each party and discuss and determine the milestones for the construction of the Upgrades and Interconnection Facilities.
- Within fifteen (15) Business Days of the Construction Planning Meeting, the Utility shall provide an executable Interconnection Agreement.
- Within ten (10) Business Days of receiving the Interconnection Agreement, the Interconnection Customer must execute and return the Interconnection Agreement.
- After the Parties execute the Interconnection Agreement, the Utility shall return a copy of the Interconnection Agreement to the Interconnection Customer and interconnection of the Generating Facility shall proceed under the provisions of the Interconnection Agreement.
- The Interconnection Agreement shall specify milestones for payment for Upgrades and Interconnection Facilities and/or, provision of Financial Security for Interconnection Facilities, if acceptable to the Utility, that are required prior to the start of design and construction of Upgrades and Interconnection Facilities.
- Payment and Financial Security must be received by close of business forty-five (45) Business Days after the date the Interconnection Agreement is delivered to the Interconnection Customer for signature.

Attachment 4-B

Financial Security Required



Attachment 5

DEFINITIVE INTERCONNECTION SYSTEM IMPACT STUDY AGREEMENT

THIS AGREEMENT ("Agreement") is made and entered into this_____ day of_____, 20___ by and between_____, a _____ organized and existing under the laws of the State of_____, ("Interconnection Customer,") and _____a _____existing under the laws of the State of _____, ("Utility"). Interconnection Customer and Utility each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated _____and received by the Utility on _____; and

WHEREAS, Interconnection Customer desires to interconnect the Generating Facility with the Utility's System and to deliver the full output of the Generating Facility to Utility subject to the terms of the South Carolina Generator Interconnection Procedures; and

WHEREAS, the Interconnection Customer has requested the Utility to perform a Definitive Interconnection System Impact Study to assess the impact of interconnecting the Generating Facility to the Utility's System, and of any Affected Systems; and

WHEREAS, the Interconnection Customer commits to provide certain Readiness Milestones or financial security if readiness cannot be demonstrated through the Definitive Interconnection Study process as described in Section 5 of Appendix Duke CS of the South Carolina Generator Interconnection Procedures.

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1.0. When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the South Carolina Generator Interconnection Procedures.

2.0. Interconnection Customer elects and the Utility shall cause to be performed a Definitive Interconnection System Impact Study consistent with Section 5 of Appendix Duke CS of the South Carolina Generator Interconnection Procedures.

3.0. The scope of the Definitive Interconnection System Impact Study shall be subject to the assumptions set forth in Attachment A to this Agreement.

4.0. The Definitive Interconnection System Impact Study shall be based upon the technical information provided by the Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with Section 1.6 and 4.1 of the South Carolina Generator Interconnection Procedures. The Utility reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Definitive Interconnection System Impact Study. If the information requested by the Utility is not provided by the Interconnection Customer within a reasonable timeframe to be identified by the Utility in writing, the Utility shall provide the Interconnection Customer written notice providing an opportunity to cure such failure by the close of business on the tenth (10th) Business Day following the posted date of such notice, where failure to provide the information requested within this period shall result in the study being terminated and the Interconnection Request being deemed withdrawn.

5.0. The final Definitive Interconnection System Impact Study report shall provide the following information, as appropriate:

- identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
- identification of any thermal overload or voltage limit violations resulting from the interconnection;
- identification of any instability or inadequately damped response to system disturbances resulting from the interconnection; and
- description and non-binding, good faith estimated cost of facilities required to interconnect the Generating Facility to the Utility's System and to address the identified short circuit, instability, and power flow issues.

6.0. Interconnection Customer shall provide the deposit as specified in Section 2 of Appendix Duke CS of the South Carolina Generator Interconnection Procedures for the performance of the Definitive Interconnection System Impact Study. The Utility's good faith estimate for the time of completion of the Definitive Interconnection System Impact Study (Phase 2) is **[insert date].**

Upon receipt of the Definition Interconnection System Impact Study results (Post Phase 3 Results), or withdrawal of the Interconnection Request, the Utility shall charge and Interconnection Customer shall pay the actual costs of the Definitive Interconnection System Impact Study, and the Withdrawal Penalty, as applicable, allocated according to Section 5.3.3 and 5.7.3 of Appendix Duke CS of the South Carolina Generator Interconnection Procedures.

Any difference between the study deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate, except as otherwise provided herein. As provided in Section 6.3.3 of the South Carolina Generator Interconnection Procedures, Interconnection Customer has thirty (20) Business Days

of receipt of an invoice from the Utility to pay any undisputed costs. If invoices are not paid within thirty (30) Calendar Days of receipt of an invoice, the Utility may draw upon the security provided to settle all accounts, which shall include any offsets of amounts due and owing by the Utility. After the final invoice is paid and all accounts are settled, the Utility shall refund all remaining security.

7.0. Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the State of South Carolina, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

8.0. Amendment

The Parties may amend this Agreement by a written instrument duly executed by both Parties.

9.0. No Third-Party Beneficiaries

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10.0. Waiver

10.1. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

10.2. Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, or duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Utility. Any waiver of this Agreement shall, if requested, be provided in writing.

11.0. Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

12.0. No Partnership

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have

any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

13.0. Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

14.0. Subcontractors

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

14.1. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Utility be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

14.2. The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

15.0. Reservation of Rights

The Utility shall have the right to make a unilateral filing with the Commission to modify this Agreement with respect to any rates, terms and conditions, charges, or classifications of service, and the Interconnection Customer shall have the right to make a unilateral filing with the Commission to modify this Agreement; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before the Commission in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties except to the extent that the Parties otherwise agree as provided herein.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert name of Utility, if applicable]

By: _____ By: _____

Title: _____ Title: _____

Date: _____ Date: _____

[Insert name of Interconnection Customer]

By: _____

Title: _____

Date: _____

ASSUMPTIONS USED IN CONDUCTING THE DISIS

[Assumptions to be completed by Interconnection Customer and Utility]